अभिज्ञान™

A Chronicle of Our Endeavours

Issue : 3 January, 2021

VISION

Ensuring ‘well being’ as a humane commitment to enliven humanity.

MISSION

The ‘well being’ ensured by extension of Available, Accessible, Affordable, Safe, Efficacious, Professional and Ethical comprehensive healthcare through state-of-art facilities.

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CONTENT

CONTENT

Letter From The Managing Director

Dear Readers,

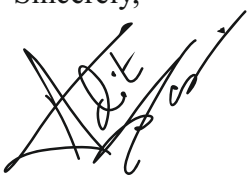
It is a privilege having received a warm response to both the editions of Abhigyaan. The content of the third edition means to promote improvement in the quality of patient care among organisations and proficiency among the healthcare personnel.

In this issue, a wide range of cases is blended, spanning different aspects of the treatment. The essence of content still lies in the spectrum of cases represented in a form of case reports, review articles and photo-essays. This issue also includes highlights on our recently effectuated department, dedicated to women and children care, KD Blossom.

I remain indebted to the contributors of the third edition as we continue to treat these cases with a multidisciplinary approach.

I trust readers will discover these articles intriguing and that they will invigorate the lookout for the betterment of the healthcare sphere. Your valuable feedback is always held in esteem as it helps us articulate quality content for you.

Sincerely,



Dr Adit Desai
Managing Director
KD Hospital, Ahmedabad

Letter From The Academic Head

Dear Readers,

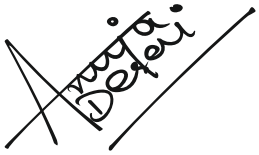
I cannot thank you all enough for appreciating the first two editions of Abhigyaan and at the same time, waiting patiently for the third edition. It has almost been a year as the pandemic hit us, shaking the entire healthcare system, however, not breaking us. As the pandemic begins to evade, we need to stay stronger and healthier to create a community that can lead the healthcare from the front for any unexpected and emergency circumstances.

In pursuit of creating a better healthcare system, we implement with our experiences and the third edition of Abhigyaan is our way to convey this message to the community. As our doctors and medical staff continue to tend to patients, we come across peculiar cases. The third edition brings forth a compilation of such one of the kind cases, which would make you curious to update your knowledge on your relevant department. We continue to maintain the lucency of these cases while maintaining the privacy terms of the patients.

Additionally, we take a new leap of faith with augmentation of on-campus and online paramedical and nursing courses affiliated with well-recognized institutions. KD Hospital also offers Internship Programs for new graduates to shape them into dependable element responsible for building superior future. The cumulative efforts of our team including experienced doctors, paramedical staff, and administration along with au courant facilities provide chimeric ailment to the individual for their academic and professional journey.

On behalf of the Editorial Board, I recognize the efforts with gratitude, of the adept consultants for sharing their experiences in the constant endeavour of providing high-quality care to the patients. We hope to continue to incorporate the latest developments as we move further in our attempt to project the excellence.

Sincerely,



Dr Anuja Desai
Director Academics
KD Hospital
Ahmedabad

For correspondence and feedback contact : dranuja@kdhospital.co.in,
academics@kdhospital.co.in

Letter From The Chief Operating Officer

Dear Associates,

As we make headway with the release of the third edition of Abhigyaan, I would like to take up this opportunity to show my gratitude towards all the readers who appreciated the first two editions of Abhigyaan and made it as a success story.

Abhigyaan is a single piece being put together by our expert doctors who not only witnessed the outlier cases but also were deeply involved in the execution. In this edition, apart from the events and CMEs, we are also adding the list of Facebook Live Sessions we have conducted since March 2020 to impart knowledge on different healthcare topics touching people's lives.

We are always working to make Abhigyaan what you need to upgrade your knowledge related to healthcare practices. Your feedback helps us improvise ourselves with every aspect so that we can include better content on our platform.

To help us make Abhigyaan the best it could ever be, we would love to hear from you.

Sincerely,

Dr Parth Desai
Chief Operating Officer
KD Hospital, Ahmedabad

A Case of Paediatric MRSA Sepsis With Multiorgan Dysfunction & Left Leg Cellulitis

Dr Snehal Patel, Dr Anand Desai, Dr Jay Patel, Dr Kartik Desai

Case Report

Abstract

Sepsis is a severe critical illness syndrome that arises from infectious insults. While the host immune system is generally beneficial, an overshooting and unregulated immune response can cause serious organ tissue injury and contribute to organ failure. Multiple Organ Dysfunction Syndrome (MODS) resembles a very critical condition and is associated with high morbidity and mortality. In this case report, we aim to discuss a case that presented with MODS secondary to sepsis and how we identified the focus. The early removal of the septic source helped us to revert MODS changes.

Introduction

Sepsis is a leading cause of morbidity and mortality in children worldwide and it may be non-specific in its initial clinical presentation, especially in younger age groups. Progression to organ failure and shock is often rapid, so early recognition and treatment are crucial. Given the time-critical nature of severe sepsis and septic shock, when sepsis is suspected on clinical grounds it is usually best to start investigations and treatment for sepsis and to continue with these until sepsis has been excluded [1].

Multiple Organ Dysfunction Syndrome (MODS) is a continuum, with incremental degrees of sepsis to septic shock and MODS. Early identification and source control intervention can prevent irreversible organ damage and reverse systemic inflammatory response syndrome (SIRS) cascade [6,7].

Methicillin-resistant staphylococcus aureus (MRSA) sepsis is a life-threatening medical condition in which the MRSA infection overpowers the immune response and leads to systemic inflammation [3]. The death rate from MRSA sepsis is greater than 20% due to uncontrolled inflammation and drug resistance. However, early diagnosis and rapid treatment increase the chances of patient survival [3].

Case

An 11-year-old male child presented to KD Hospital with acute renal failure (requiring dialysis) and high bilirubin level. On presentation, he was oedematous and tachypnoeic with increased oxygen requirement accompanied by intercostal and subcostal recessions. He was deeply icteric. X-ray chest showed bilateral pleural effusion and bilateral infiltrates.

Patient was admitted in PICU and noninvasive ventilation (NIV) support was started as there was increased work of breathing in spite of supplemental oxygen. Blood investigations revealed haemoglobin (Hb) level of 8, total count (TC) of 12,300, platelet count (PC) of 1,15,000, prothrombin time (PT) of 18.4, international normalised ratio (INR) of 1.37, ammonia level of 17.5, C-reactive protein (CRP) level of 119.02, SGPT 19.6, creatinine 4.66, bilirubin 7.250, conjugated bilirubin 6.672, blood urea 226.3. Urine routine & micro (R/M) showed the presence of glucose, protein, bilirubin, and 35 pus cells, 58 RBCs, 12 epithelial cells. Blood culture was sent in pathology. The patient was put on dialysis after inserting no. 8 dialysis catheter.

A day after the hospitalisation, the patient was looking more icteric with rising bilirubin value (11 mg/dL), although liver enzymes and coagulation profile were within normal limits. His haemoglobin was dropped to 6 g/dL, so he was administered one unit of packed red cells. He required inotropic support for hypotension. Gastroenterologist's opinion was taken and he suggested the possibility of septic hepatopathy. The patient had a history of fever of 3 days.

Upon further investigation of the patient's history, he was found to have a fall from a bicycle 5 days prior to the hospitalisation and had a mild swelling of the left ankle following the same. On examination, there was mild erythema over the left ankle and localised swelling. He was referred to a general surgeon and he recommended debridement with fasciotomy. The patient underwent debridement of the localized area with multiple incision surgeries and fasciotomy of the left foot the same day. Tissue culture was sent in pathology.

The tissue culture report showed methicillin-resistant staphylococcus aureus (MRSA) growth and the blood culture showed no growth. While maintaining contact isolation precautions, renal doses were adjusted with an increased dose of the antibiotics and initiation of injection linezolid. The patient's urine output improved and oedema reduced over the next 4-5 days. We stopped the dialysis as his renal profile improved.
Patient's septic profile started improving, bilirubin levels dropped, and icterus reduced. He started having enteral feeds, which were escalated and tolerated well. He had wound-dressing every alternate day, which improved his wound condition gradually. A dialysis catheter was removed from the patient as the creatinine

levels were back in the normal range with adequate urinary output. The patient was discharged on oral linezolid as his condition improved, and was advised to have a regular follow-up for dressing. At his follow up visit, the wound on the left foot improved significantly with his overall condition being fair. His bilirubin and creatinine levels were back within the normal range and repeat tissue swab culture was negative.

Discussion

MRSA causes an illness that includes skin and soft-tissue infections, bacteremia and endocarditis, pneumonia, bone and joint infections, central nervous system disease, toxic shock and sepsis syndromes [4]. Infection is initiated by the local invasion of microorganisms into a living body. If microorganisms overcome a host's immunological self-defence system, they can locally extend or spread to distant tissues and organs via the blood stream leading to systemic inflammatory response syndrome (SIRS).

Paediatric multiple organ dysfunction syndrome (MODS) is common among paediatric intensive care unit (PICU) patients, occurring in up to 57% depending on the population studied; sepsis being its leading cause [8]. It is characterized by the simultaneous failure or dysfunction of organs or organ systems, including the respiratory, cardiovascular, neurological, renal, haematological and hepatic systems.[8]

During infection, the liver plays a critical role in modulating host defence and regulating the inflammation, mostly via the clearance of pathogens and in producing acute-phase proteins. Therefore, liver involvement is one of the MODS components, which is usually associated with poor prognosis during sepsis [7].

In MRSA infections, simple abscess or boils can be managed with incision and drainage. An extensive course of antibiotics is recommended for the patients having abscess associated with severe disease (e.g. multiple sites of infection) or rapid progression of infection in the presence of associated cellulitis, immunosuppression, or associated comorbidities [4].

Haemodialysis was used in this case as an established clinical therapy for AKI [7]. Intravenous/oral linezolid has been shown to be effective and well-tolerated in children with MRSA infections [5].

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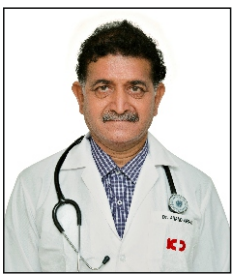
Dr Snehal Patel
DNB Paediatrics, AICP



Dr Anand Desai
MS General Surgery

Dr Jay Patel
MD Medicine,
DM Nephrology

Dr Kartik Desai
MD Medicine,
DNB Gastroenterolgy

Chylous Ascites In a Post Roux-en-Y Gastric Bypass Patient Indicating Internal Hernia

Dr Manish Khaitan, Dr Riddhish Gadani, Dr Koshish Nandan Pokharel

Case Report

Abstract

Internal hernia is one of the most common complications after laparoscopic RYGB, and its incidence is decreased with antecolic/antegastric Roux limb positioning and closure of all mesenteric defects. Chylous ascites is a rare finding during exploration for internal hernia or small bowel strangulation from any cause, but it is thought to be secondary to chronic obstruction of the low flow lymphatic channels with subsequent leakage of chyle into the peritoneum without obstruction of high flow venous and arterial vessels. We present a case of internal hernia after laparoscopic Roux-en-Y gastric bypass (RYGB) for morbid obesity associated with the presence of chylous ascites.

Introduction

Internal hernia (IH) is one of the most common complications following laparoscopic Roux-en-Y gastric bypass (RYGB) for the treatment of morbid obesity. Internal hernia occurs when the bowel herniates through mesenteric defects created during mobilization of the Roux limb to the gastric pouch. Clinically, patients can present with intermittent abdominal pain or obstructive symptoms, or may present acutely with small bowel obstruction or strangulation. Diagnosis is made with high clinical suspicion augmented by abdominal computed tomography (CT). Although not present in all internal hernias, the typical "swirl sign" has high sensitivity for it.[1] Emergent surgical intervention is the standard treatment for internal hernia to reduce the hernia, repair the defect, and assess for ischaemic bowel. Diagnostic laparoscopy is also advocated in patients with high clinical suspicion without typical findings on abdominal CT.[2]

Case

A 31-year-old male patient with a body mass index (BMI) of 42.6 kg/m^2 with no other comorbidities underwent banded RYGB. The gastrojejunostomy was created in an antecolic/antegastric fashion with a 60 cm Roux limb and 80 cm biliopancreatic limb. However, Petersen's defect was not closed. The jejunal mesenteric defect was closed with a running 2-0 Ethibond suture. The patient tolerated the procedure well without adverse events and was discharged when tolerating a liquid diet on postoperative day-2. On outpatient follow-up, he had no issues, his diet had advanced appropriately, and he achieved adequate weight loss (116 kgs to 70 kgs in 9 months).

He presented to the emergency department after 9 months, with severe left upper quadrant and flank pain for one day associated with nausea. The patient had initially consulted a local general practitioner where renal colic was suspected and injection diclofenac was given for pain relief. But he did not have any relief from pain and the patient underwent USG of abdomen which did not show any abnormality. He presented at KD Hospital with worsening of his abdominal-flank pain and he was administered injection Buscopan, injection tramadol and injection fentanyl without any relief in the pain. Vital signs and laboratory workup were within normal limits. Plain CT abdomen/pelvis revealed misty mesentery and swirl sign at mesentery base with compression of superior mesenteric vessels [Fig.1].

The patient was immediately taken to the operating room, where diagnostic laparoscopy revealed a viable but dusky small bowel with a moderate amount of milky-white appearing mesentery and milky-white free fluid. Portions of the small bowel mesentery were also stained white [Fig.2]. Bowels were traced starting from ileocaecal junction and hernia was reduced [Fig.3]. Loops of bowel were herniating from Petersen's defect and it was closed by suturing mesocolon to the base of mesentery by running Ethibond suture [Fig.4]. The patient recovered well after surgery. Liquids were started on postoperative day-1 and the patient was discharged with a regular diet on postoperative day-2.

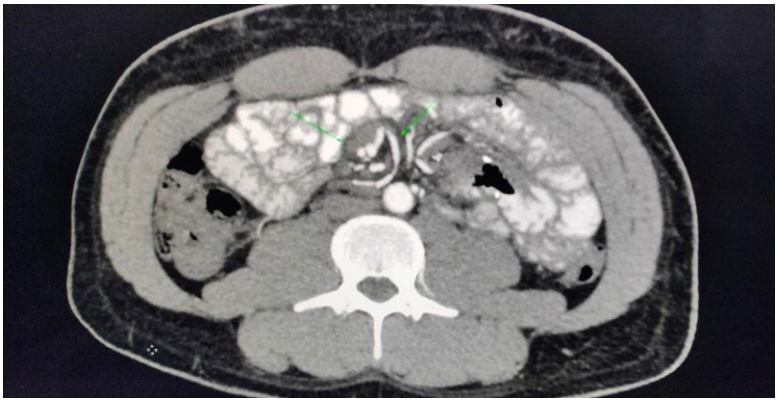
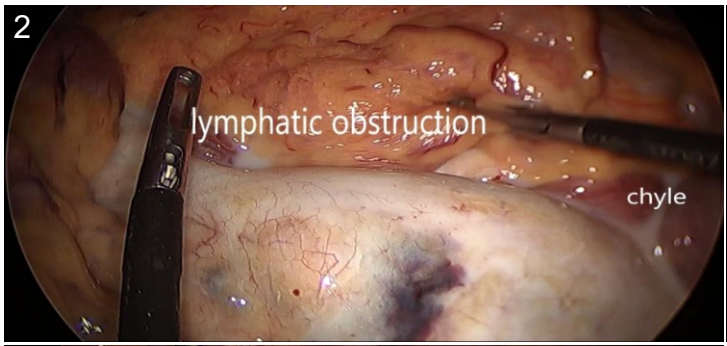
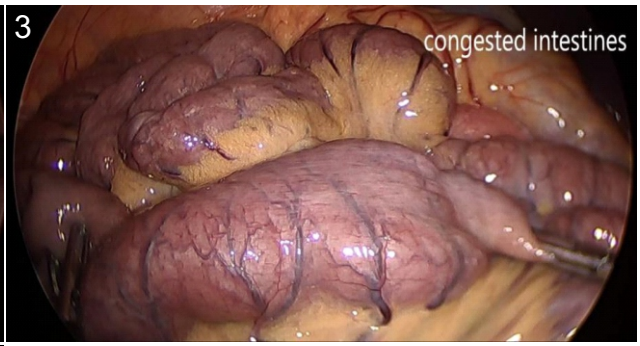


Figure 1. Contrast enhanced CT scan report shows typical 'swirl sign' and misty mesentery suggesting nternal hernia.





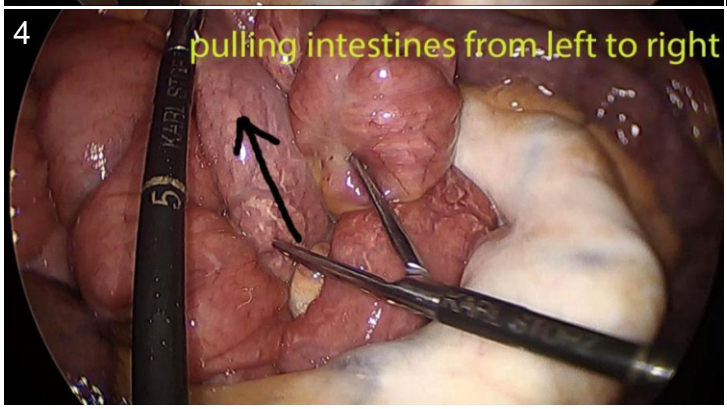


Figure 2: Diagnostic laparoscopy suggestive of lymphatic obstruction and chylous ascites with hernia.

Figure 3: Timely procedure prevented catastrophe, intestines were in phase of venous congestion.

Figure 4: Reduction of intestines from Peterson's defect

Discussion

Internal hernias have been described in nearly 3% of patients after laparoscopic gastric bypass.[3] To reduce the incidence of internal hernias, all mesenteric defects should be closed with nonabsorbable sutures. In a multicenter trial, 2507 patients were randomly assigned to undergo laparoscopic Roux-en-Y gastric bypass with or without mesenteric defect closure. Compared with nonclosure, mesenteric closure significantly decreased the incidence of reoperation due to small bowel obstruction (6% versus 10% at three years) but increased early postoperative complications due to kinking of the jejunojejunostomy (4.3% versus 2.8%). In another study, the small bowel obstruction rate was reduced from 6% to 3% when all such defects were routinely closed.[4]

The majority of internal hernias after laparoscopic gastric bypass occurred through the transverse mesocolon defect (44 of 66 in one study). The use of an antecolic Roux limb can, in theory, reduce the risk of internal hernia formation by eliminating the transverse mesocolic defect. A 2016 meta-analysis found that the use of an antecolic Roux limb, as opposed to a retrocolic Roux limb, was associated with lower rates of postoperative internal hernia (1.3% versus 2.3%) and small bowel obstruction (1.4% versus 5.2%). However, the two techniques have not been directly compared with each other in randomized trials.[5]

Internal hernias can be difficult to detect radiographically because they are intermittent. Several studies have shown that the "mesenteric swirl" sign on CT scan is the best indicator of an internal hernia following gastric bypass. The mesenteric swirl sign shows a swirled appearance of mesenteric vessels or fat at the root of the mesentery. The mesenteric swirl sign has high sensitivity (78% to 100%) and specificity (80% to 90%) and can be easily recognized by experienced radiologists with a high interobserver agreement.

Modern references in the literature most commonly define the boundaries of the hernia defect to be the transverse mesocolon inferior edge, the mesentery of the alimentary limb and the retroperitoneum. They are generally used to describe a herniation of small bowel into the space created between the cut edge of the Roux limb mesentery and the transverse mesocolon, being it secondary to a clockwise or an anti-clockwise rotation.[6,7]

In our practice, we do only antecolic roux limb technique and do not routinely close Petersen's defect, however, we close mesenteric defects. We don't close Petersen's defect as we cut the jejunal omentum generously such that the alimentary limb can easily reach the lower end of the oesophagus. So, intestines usually do not get obstructed from this large defect.

One major challenge with these patients is that the presenting signs, symptoms and radiological examinations may be nonspecific or nondiagnostic. The most commonly reported clinical symptoms are abdominal pain (sometimes intermittent due to recurrent herniation) and nausea/vomiting. Abdominal pain is present in almost all patients, often in the epigastric region and with dorsal irradiation. Nausea or vomiting is also present in a majority of patients and many have few clinical signs, even in the presence of incarcerated bowels. However, symptoms might be so sporadic and self-resolving that patients do not complain to their attending surgeon as they think it is "normal" after surgery or results from alimentary excesses.

There are many case reports of internal hernias with findings of engorgement of lymphatics of the small intestine and chylous ascites.

Interestingly, no bowel has been reported to be frankly ischaemic in any reports of chyloperitoneum secondary to intestinal obstruction, and the chylous ascites is reported to quickly resolve after correction of the obstruction.

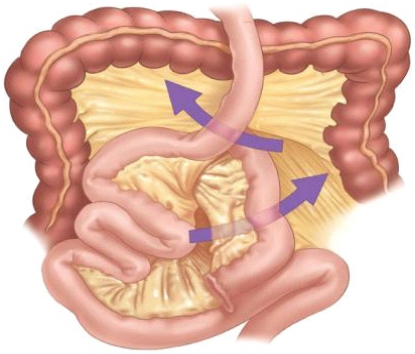


Figure 5: Diagram showing mesenteric defects

The mechanism of chyloperitoneum in strangulated bowel is proposed to be from chronic obstruction of the low flow lymphatic channels without complete obstruction of the higher flow venous or arterial vessels. Over the period, chyle builds up within the small bowel mesentery from this obstruction and eventually leaks into the peritoneal space, causing chylous ascites. Lymphatic obstruction due to twisting of the mesentery is most likely attributable to this finding. Lymphatic engorgement presents as a "misty mesentery" in CT scan. Swirl sign, misty mesentery and pain not responsive to potent analgesics are strong indicators of possible internal hernia and patient should be explored without delay.[8]

In the present case, the defect was present between an alimentary limb and transverse colon-mesocolon arising possibly due to weight loss. In Petersen's hernia, the intestines have to be reduced from patient's left to right as hernia goes from right to left. We always start following the intestines from the ileocecal junction and then reduce the hernia.

Conclusion

Internal hernia is not a rare complication after gastric bypass surgery and has to be dealt timely else the complications might be devastating. The patients also should be well educated about contacting the concerned bariatric surgeon in case of severe pain in the abdomen not responding to routine analgesics.

We recommend closing all defects to lower the incidence of internal hernias. There should be a low threshold for diagnostic laparoscopy even if laboratory and radiological findings may be non-specific.

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Dr Manish Khaitan
MS General Surgery, FAIS

Dr Riddhish Gadani
DNB General Surgery

Dr Koshish Nandan Pokharel
MS General Surgery

Challenging Revival of A Diabetic Patient with Cellulitis, Necrotising Fasciitis, Septic Shock, and Acute Renal Failure

Dr Anand Desai, Dr Jay Patel, Dr Rutvij B. Parikh

Case Report

Abstract

A 46-year-old male diabetic patient presenting with the chief complaint of anuria was diagnosed to have cellulitis and necrotising fasciitis that had rapid progress leading to septic shock and acute renal failure. Though it is one of the most challenging surgical infections, early diagnosis and treatment led to good prognosis and healing.

Introduction

Necrotizing fasciitis (NF) can be described as an uncommon, severe, potentially lethal soft tissue, skin, and muscle infection that develops in the scrotum, perineum, abdominal wall, or extremities. The infection exhibits rapid progress, septic shock, multiple organ dysfunction syndrome (MODS) and hence, a high mortality rate.[1,2]

Co-morbidities like diabetes mellitus, immunosuppression, chronic alcohol disease, chronic renal failure, and liver cirrhosis make the prognosis very poor.[1,3] Early diagnosis of NF is mandatory as any delay may prove fatal, given its association with more extensive surgery, higher rates of amputation, and higher mortality rates.[1,2,4]

Case

A 46-years-old male patient, having a history of diabetes mellitus and taking regular oral antidiabetic medication for the same for the past 6 years, presented with a complaint of intermittent fever of 2 days, abdominal pain, and pain in the left hip region of 3 days, and anuria of 24 hours. There was a blister over the left thigh and the left flank region for 2-3 days with local discolouration (blackening) of the skin [Fig.1].

Figure 1: Blister over the left thigh and left flank region with local skin discolouration

On arrival, the patient was afebrile and the blood pressure, respiratory rate was normal, pulse rate was 120 BPM, urea 148.8 mmol/L, creatinine 2.08 mmol/L, Na+ 129 mEq/L, K+ 4.5 mEq/L, CPK total 533 mcg/L, HIV & HbsAg negative, amylase 12, blood group A positive, arterial blood gas analysis pH 7.31, pCO2 23.01 mmHg, pO2 107 mmHg, SpO2 97.8%, base excess 13.01 mmol/L, HCO3 11.3 mEq/L, urine routine micro showed 3-5 pus cells and 3-5 RBCs.

Further investigation revealed altered renal function test due to acute kidney injury, primarily due to septic shock. HbA1c was around 10% with uncontrolled diabetes mellitus. The patient was referred to a general surgeon and he was diagnosed with **necrotising fasciitis with overlying cellulitis.** The criticalness of the patient's condition was explained to the relatives and the need for urgent debridement was explained.

After taking into consideration the risk involved, the patient was operated on giving multiple incisions to perform debridement and fasciotomy of the left flank, left inguinal region, and left thigh on the 3rd day after admission [Fig. 2]. Extensive loss of skin of flank and thigh was observed, and complete necrotic subcutaneous tissue with underlying external oblique muscle excision was done.

Figure 2: Multiple incisions to perform debridement and fasciotomy

Figure 3: After secondary suturing

The patient was admitted in ICU postoperatively and administered intravenous antibiotics analgesics, insulin, and provided other supportive management. The patient responded well to ICU care, dressings, high dose antibiotics, and repeated blood transfusions. Secondary suturing of the wound was performed. [Fig 3].

At one month follow up, cacuum-assisted wound closing (VAC) therapy (negative suction dressing) was planned for 2 sittings which helped in preparing the bed of the wound for healthy granulation tissue. Subsequently, the area was prepared for soft tissue graft (STG) [Fig. 4, 5, 6, 7].

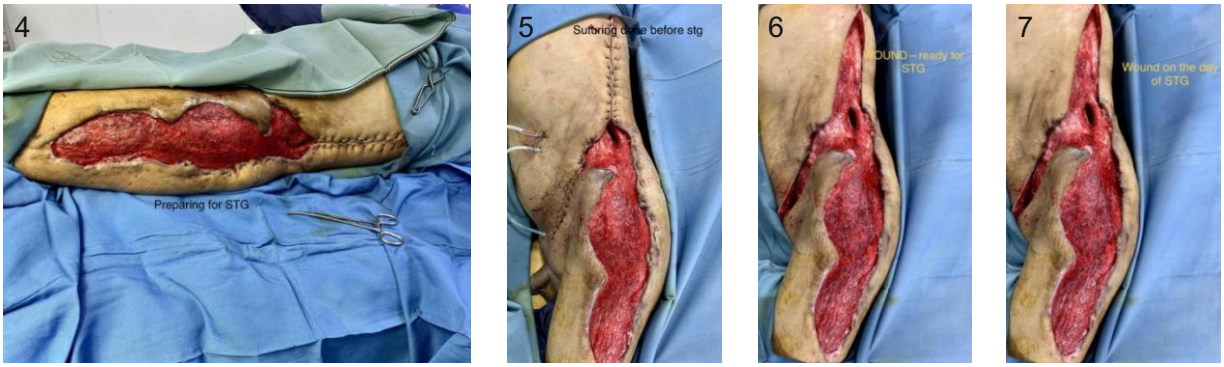

Figure 4,5,6,7 : Wound preparation for STG. STG was done after 2 months of ICU admission with a smooth postoperative outcome

Figure 8, 9 : Healing after STG

Discussion

The annual incidence of NF is estimated at 500–1,000 cases a year, and its prevalence globally has been reported to be 0.40 cases per 100,000 population.[1,5] It is seen to have a predilection for men, with a male-to-female ratio of 3:1.[1,4] it can progress to a life-threatening condition, with a high mortality rate that approaches 100% without treatment.[1,4]

In NF, the clinical status of the patient varies from erythema, swelling, and tenderness in the early stage to skin ischaemia with blisters and bullae in the advanced stage of infection.[1,6] Diagnosis is hindered by the fact that the disease progresses below the surface, and the cutaneous manifestations belie the severity of the disease.[2,7]

Leukocytosis is a common feature in patients with necrotizing fasciitis, and white blood cell count above 20,000/L is highly suspected. Blood urea nitrogen >18 mg/dL and serum creatinine >1.2 mg/dL reflect ongoing renal failure, which is typically present in these patients.[1,8]

Patients displaying accompanying diseases are usually characterized as critically ill and require prolonged intensive care.[1] Diabetes, in particular, is a disease, which often combines many of the above co-morbidities, and is hence susceptible to the development of NF.[3,9,10] The prevalence of diabetes mellitus in patients with any type of NF ranges between 40% and 60%.[6,11] Elevated serum creatinine, along with elevated blood urea, is also strongly associated with higher mortality rates.[12]

Management of the infection begins with broad-spectrum antibiotics, however, early and aggressive drainage with meticulous debridement constitute the mainstay of treatment. [1,13] Emergency surgical debridement of

the affected tissues is the primary management modality for NF. Surgical intervention is life-saving and must be performed as early as possible since a delay in treatment beyond 12 hours in fulminant forms of NF can prove fatal. Surgical debridement should be repeated during the next 24 hours or later, depending on the clinical course of the necrotizing infection and vital functions.[1] Many studies have pointed out that timing and the extent of the first debridement are the most important risk factors in terms of increased mortality rate. Mock et al. have shown that the relative risk of death was 7.5 times greater in cases of restricted primary debridement,[13] whereas, other studies reported that the mortality rate was 9 times greater when primary surgery was performed 24 hours after the onset of symptoms.[11] Surgical management is indicated especially for patients displaying intense pain and skin colour change, such as oedema and/or ecchymoses, or signs of skin ischemia with blisters and bulla.[1]

Postoperative management of the surgical wound is also important for the patient's survival. The VAC system has proved to be helpful in wound management, with its combined benefits of continuous cleansing of the wound and the formation of granulation tissue.[1] Patients with extensive skin loss require meshed split-thickness skin grafts. These contract and draw the remaining undamaged skin together, leaving a reduced soft tissue defect.[4]

Conclusion

Necrotizing fasciitis is amongst the most challenging surgical infections. Management of NF is difficult due to a combination of difficulty in diagnosis, difficult early and late management, prolonged hospital stay, painful dressings, an extended recovery, and in some unfortunate cases even loss of limb or life. However, early diagnosis helped in the effective management of the presented case.

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Dr Anand Desai
MS General Surgery

Dr Jay Patel
MD Medicine, DM Nephrology

Dr Rutvij B. Parikh
MS Surgery , MCh Plastic Surgery

Gall Bladder Perforation With Generalized Biliary Peritonitis

Dr Jigar Mehta, Dr Jay Patel, Dr Amit Shah

Case Report

Abstract
A young female with the presentation of abdominal pain and vomiting was suspected to have perforated appendicitis on USG. While she continued to have decline in her haemoglobin levels and impaired renal function, her laparoscopic surgery revealed gallbladder perforation with biliary peritonitis.

Introduction

Gallbladder perforation (GBP) is a rare but life-threatening complication of acute cholecystitis [5]. Sometimes GBP may not be different from uncomplicated acute cholecystitis with high morbidity and mortality rates because of delay in diagnosis[8-9]. Hence, gallbladder perforations continue to be a vital issue for the surgeons due to difficulty with diagnosis, where it mostly can be diagnosed during the surgery only.

Case

A 33-year-old female patient presented with complaint of abdominal pain with associated vomiting of 3 days. The patient had consulted another hospital where USG abdomen revealed mild localized fluid collection with septations and omentum covering in the right lower abdomen and pelvis and the possibility of perforated appendicitis was anticipated.

At admission, the patient's blood investigations indicated haemoglobin (Hb) 9.2 gm, total count (TC) 12,400, platelet count (PC) 3,63,000, serum creatinine 5.66, SGPT 6.2, prothrombin time 18.62, international normalised ratio (INR) 1.42, activated partial thromboplastin time (APTT) 38.35, urine routine & micro (R/M) 8-10 pus cells and plenty RBCs, blood urea 184.1, and bicarbonate 19.8. CT abdomen and pelvis was done, which showed mild free fluid in perihepatic space, bilateral paracolic gutters in the root of mesentery, pelvis and appendix were normal with gall stones. The patient was referred to nephrology for her elevated serum creatinine and was treated for the same.

Blood investigation done on the second day after her admission showed haemoglobin 8 gm, total count 11,500, platelet count 3,35,000, blood urea 169.8, serum creatinine 4.95, serum sodium 132, serum potassium 3.5, serum chlorine 98, urine R/M showed polymorphs 20, lymphocytes 80, RBCs 12-15. Blood culture & sensitivity showed no growth.

The patient underwent emergency diagnostic laparoscopy that led to the diagnosis of the perihepatic free fluid to be bile leading to a diagnosis of gall bladder perforation. Emergency laparoscopic cholecystectomy and laparotomy peritoneal lavage were performed under general anaesthesia.

The patient started taking clear liquids orally. Her postoperative blood investigations showed improvements in the reports with the administration of IV fluids, IV antibiotics (injection Merrobe and injection Metrogyl), and other supportive management. Her labs showed haemoglobin 10.2 gm, total count 16,600, platelet count 5,95,000, serum sodium 138 mEq/L, serum potassium 3.7 mEq/L, blood urea 104.1 and creatinine 1.39. She was discharged 4 days after her admission in a haemodynamically stable condition.

At her follow-up visit after 10 days, the patient had no other associated symptoms and she felt well.

Discussion

Niemeier[6] in 1934, classified free gallbladder perforation and generalized biliary peritonitis as acute or type-I gallbladder perforation, pericholecystic abscess and localized peritonitis as subacute or type-II gallbladder perforation, and cholecystoenteric fistula as chronic or type-III gallbladder perforation.

According to one study, 12 (3.3%) cases of acute cholecystitis were complicated by gall bladder perforation out of a total of 386 patients [2], while another study has reported the incidence of gall bladder perforation complicating acute cholecystitis in 5.9% of 31 patients [3]. Gall bladder perforation has also been reported in the literature with acute acalculous cholecystitis but at a lower rate [4].

Glenn and Moore[7] have reported that the mortality rate of gallbladder perforation patients is 42%, while other studies reported that the mortality rates are decreased to 12%-16% owing to the developments in anesthesiology and intensive care conditions[8,9]. The morbidity and mortality rates were 37.5% and 12.5%, respectively in the present study.

Conclusion

Early diagnosis of gallbladder perforation and immediate surgical intervention are of prime importance in decreasing morbidity and mortality associated with this condition. The presence of risk factors certainly warrants an aggressively oriented investigation stratagem to rule out this serious complication [1].

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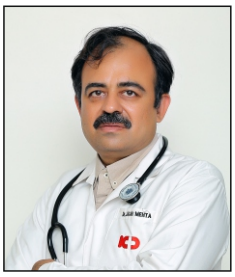

Dr Jigar Mehta
DA, MD Critical Care &
Intensive Care

Dr Jay Patel
MD Medicine,
DM Nephrology

Dr Amit Shah
MS General Surgery,
MRCS, MHPBS

Steroid Induced Myopathy: A Highly Overlooked Entity

Dr Samir Patel, Dr Ruchir Divatia, Dr Hiren Patt

Case Report

Abstract

Drug-induced myopathy is defined as an acute or subacute adverse effect of a drug on the muscular system, which may range from an asymptomatic increase in serum creatine kinase and simple myalgias to life-threatening rhabdomyolysis. The treating physician must recognize these manifestations early and manage promptly to prevent treatment-related morbidity and mortality. We present a case of a 60-year-old female with subacute myopathy after chronic steroid use.

Introduction

Glucocorticoid-induced myopathy was first described by Harvey Cushing in 1932 in Cushing's syndrome.[1] He noted that patients with endogenous glucocorticoid excess developed severe proximal muscle wasting and weakness. Around 60% of the patients with Cushing's syndrome develop muscle weakness.[2] With the increasing use of glucocorticoids to treat several medical conditions, exogenous glucocorticoids have become the most common cause of drug-induced myopathy.[3] Although any commonly used glucocorticoid can cause myopathy, it is implicated more often with the fluorinated glucocorticoid preparations, such as dexamethasone, triamcinolone, and betamethasone.

Case

A 60-year-old female with the past medical history of hypertension presented to the neurology department with progressive bilateral symmetrical proximal lower extremity weakness. The patient had been in her usual state of health until approximately six months before admission. She reported increasing fatigue, weight gain and muscle weakness with increasing difficulty standing from a seated position and difficulty climbing stairs. One month before admission her weakness progressed, and she was no longer able to ambulate independently. She denied any upper extremity weakness, paraesthesia or any bowel-bladder related symptoms. Medical history revealed that she had been taking steroids for osteoarthritis of bilateral knees for the past one year.

On examination, the patient appeared well with a Cushingoid habitus. Her vital parameters were normal. Examination of the abdomen showed central obesity with multiple linear striae along bilateral flanks but no other abnormality. Her skin presented erythema and ecchymoses. Inspection of her lower limbs showed symmetrical muscle tone with atrophy of quadriceps femoris. Palpation of the lower limbs showed no tenderness or myalgia. On motor examination, muscle power: bilateral hip flexion and extension 3, knee flexion and extension 3+, shoulder abduction and adduction 4+, elbow flexion and extension 4.

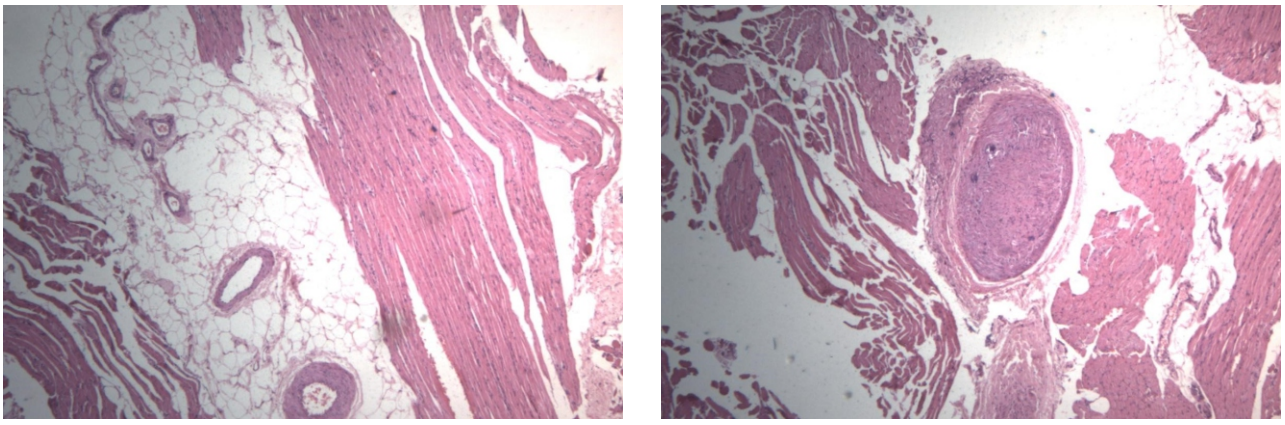

Figure 1: Fibrointimal hyperplasia with focal calcification of interstitial blood vessels

Laboratory test results showed creatinine phosphokinase (CPK) 27 U/L, calcium 8.79 mg/dl, Vitamin D3 - 14.5 ng/ml, thyroid-stimulating hormone (TSH) 0.44 micro IU/ml. Blood levels of electrolytes, glucose, total protein, total bilirubin, alanine aminotransferase (ALT) and alkaline phosphatase (ALP) were within the normal range. Serum cortisol was 0.5 mcg/dl and adrenocorticotropic hormone (ACTH) was 5 pg/ml. EMG study showed myopathic potential without any active denervation. Muscle biopsy revealed moderate atrophy of muscle fibres and adipose tissue deposition. Interstitial blood vessels revealed fibrointimal hyperplasia with focal calcification. These findings were suggestive of steroid-induced myopathy (Figure 1). She was started on prednisolone 5 mg daily for 5 days followed by 2.5 mg daily with cortisol and sugar monitoring. She was also started on calcium, vitamin D3 and supportive treatment including a high protein diet. The patient was started on physiotherapy for proximal muscle strengthening which improved gradually.

Discussion

Understanding the pathophysiology of glucocorticoid-induced myopathy is essential for distinguishing organic versus iatrogenic aetiologies of new-onset muscle weakness. Physical examination, measurement of serum creatine kinase (CK) or aldolase, electrophysiologic studies, and muscle biopsy findings can provide important information regarding the aetiology of patients presenting with these symptoms.[3]

The clinical manifestations of glucocorticoid-induced myopathy include proximal muscle weakness and atrophy of proximal muscle groups without myalgia or muscle tenderness. Weakness most commonly appears in the lower extremities before affecting the upper extremities. The onset of weakness may be dose-dependent as well as duration-dependent, and studies have shown that doses of 40–60 mg/day can induce weakness within two weeks.[4] Muscle atrophy may be exacerbated by inactivity, which sensitizes skeletal muscle to the catabolic effects of steroids. Serum CK or aldolase levels are typically within normal limits and are rarely elevated. However, serum lactate dehydrogenase (LDH) levels may be elevated.[5]

Electromyography studies often show no abnormalities in conduction rates. Muscle biopsy of the affected muscle groups may show increased numbers of sarcolemmal nuclei, loss of fibre cross-striations of type II-b fibres, without necrosis or inflammation.[5] The diagnosis of glucocorticoid-induced myopathy is most often based on history and physical examination, as there is no definitive test for this condition. Symptoms of weakness commonly show improvement after three to four weeks following discontinuation of steroid therapy.

Conclusion

This case has been presented to raise the clinical suspicion for glucocorticoid-induced myopathy in patients presenting with muscle weakness in the context of chronic high-dose steroid use. Also, this case highlights the use of steroid-sparing modalities when appropriate, and recognizes the need for a multidisciplinary approach to the evaluation and treatment of patients.

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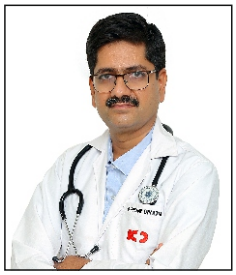
Dr Samir Patel
MD Medicine,
DNB Neurology
MRCP, MNAMS



Dr Ruchir Divatia
MD Medicine,
DM Neurology

Dr. Hiren Patt
MD Medicine,
DM Endocrinology

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A Curious Case of Drug Complication: Dapsone Induced Agranulocytosis

Dr Jigar Mehta, Dr Anand Desai, Dr Kartik Desai

Case Report

Abstract

Agranulocytosis is a rare but serious complication of sulfones caused by the myelotoxic effect of these drugs. An occurrence of 0.2-0.4% has been described in patients treated with dapsone. Although reversible, this infection can lead to sepsis and even death [5].

Introduction

Dapsone (diamino-diphenyl sulfone) is used for treating refractory skin diseases such as leprosy, pemphigus, and dermatitis herpetiformis. The side effects associated with the use of Dapsone include haemolytic anaemia, methaemoglobinaemia, and agranulocytosis [1]. Though agranulocytosis is a rare condition, it can become a life-threatening illness if sepsis develops. We report a case of agranulocytosis as a side effect of Dapsone, which presented as pyrexia of unknown origin (PUO) and the patient had to undergo multiple admissions. The patient was treated with granulocyte colony-stimulating factor (GCSF) and folinic acid.

Case

An 18-years-old male patient was admitted with complaint of abdominal pain, frequent loose stools, 15 days of high-grade fever and severe neutropenia of 10 days. The patient had brought a pathology report indicating a positive Widal test and a working diagnosis of leukaemia with PUO. The patient had taken treatment from multiple hospitals for the same.

On admission, the patient's bone marrow examination showed agranulocytosis with occasional blasts. His blood culture and sensitivity test were negative, still persistently on the lower side. The patient was treated with granulocyte colony-stimulating factor (GCSF) and folinic acid. The patient remained haemodynamically stable. He was continued doxycycline, linezolid, AKT4, and Metrogyl due to thickened colon wall colitis (could be intestinal TB/brucellosis).

While providing a detailed history, the patient informed that he had been taking dapsone for the last 4 months for skin disease from a local physician. Patient's differential diagnosis included dapsone-induced agranulocytosis, secondary infective colitis, severe amoebiasis leading to bone marrow suppression, and primary haematological issues (haematological references inconclusive).

The patient had unremarkable investigations except for colitis in CT abdomen and some disseminated patches in the lung over the lower segment. Multiple ulcers in ascending colon classical of the amoebiasis biopsy were seen in the endoscopy done on the 5th day of admission characterizing non-specific inflammation. His GCSF treatment was continued for 7 days. As the patient was on Metrogyl for 2 weeks, he was started on tinidazole.

Patient's total count surprisingly started rising without any new intervention, thereby confirming the diagnosis of dapsone-induced agranulocytosis. Unfortunately, the patient took discharge against medical advice (DAMA) at the total count of 2900 and they were not ready to wait till the abdominal pain subsided.

The patient was admitted in the hospital two days later with the onset of bloody diarrhoea. He reached the hospital in an arrest situation in the evening with severe bleeding per rectum. He was immediately intubated and CPR was given with volume replacement. He had a return of spontaneous circulation (ROSC) after 20 minutes and was shifted to the ICU. Due to low haemoglobin level of 3g/dL, his haemodynamic stability was achieved by administering 4 PCV. The condition of the patient improved within 8-10 hours as his bleeding discontinued and he became conscious on the ventilator. The patient required haemodialysis because of ischaemic injury but started passing urine within the next 24 hours and was extubated after 72 hours of mechanical ventilation.

He underwent colonoscopy which revealed extensive ulceration in ascending colon up to the transverse colon. Adrenaline was injected and surgical hemicolectomy was planned as embolisation was contraindicated due to the presence of a disease in the colon. The patient was kept under observation in the general ward as his relatives were reluctant for his radical surgery. He was taking oral food and passing stool, however, he still had abdominal pain. After 10 days of stability and generalised improvement with decreasing creatinine, the patient had a sudden episode of rebleeding and collapsed again while shifting to the ICU from the ward. The patient was intubated and mechanical ventilation started.

The relatives were explained the need for an urgent laparotomy and hemicolectomy. They were ready for the same and urgent laparotomy with hemicolectomy and diversion ileostomy was performed. The patient's condition improved after the surgery and he was gradually weaned off from the ventilator. Histopathology of the specimen showed pyogenic gangrenous necrosis and nonspecific nodes. The patient was then discharged

with ileostomy while having WBC count and creatinine within the normal range.

On the patient's third admission, uneventful course of treatment was followed with patient discharge after one day in a haemodynamically stable condition. One week later, he visited the hospital again with umbilical pain and right-sided lower abdominal pain. Blood investigations and USG of abdomen-pelvis was unremarkable. His colonoscopy showed diversion colitis, CMV colitis and infection. He was discharged stable in 3 days following end ileostomy. 3 weeks later on his 5th admission, he came to the hospital for the closure of an ileostomy. He went home in 4 days after the surgery with haemodynamically stable condition.

Discussion

The most common side effects of Dapsone are hemolytic anaemia, methemoglobinemia, and agranulocytosis [1]. Hemolytic anaemia is a dose-dependent side effect that usually occurs three to four weeks after dapsone therapy is initiated if the dose is >300 mg/day [2]. Although the mechanism underlying the side effects is unknown, it has been reported that dapsone reduces the lifespan of red blood cells [2]. Agranulocytosis develops 4 to 12 weeks after dapsone therapy is initiated, and it gradually progresses. The initial symptoms are fever, swelling of the lymph nodes, and inflammation and ulcers of the oral cavity, pharynx, and oesophagus. Once agranulocytosis develops, a patient's increased susceptibility to sepsis and death may occur. However, unlike methemoglobinemia, agranulocytosis is not a dose-dependent side effect of dapsone, and the mechanism of agranulocytosis due to dapsone remains unknown [2].

In our case, the cause of severe abdominal pain along with agranulocytosis was initially unknown. Increase in the patient's total count without any new intervention gave us the hint of dapsone induced agranulocytosis. It is reported that 50 to 125 mg of dapsone induced severe agranulocytosis. Patients taking Dapsone for dermatitis herpetiformis are at a 25 to 33 fold greater risk of agranulocytosis than normal [1]. Careful observation is required when treating with dapsone for inflammatory diseases. After multiple admissions, the patient successfully recovered without any neurologic injury. We managed to prevent organ injury despite multiple organ insults.

Conclusion

Agranulocytosis is one of the side effects of dapsone; therefore, it should be administered with caution for chronic use. The consulting physician should always be wary of symptoms and complications if dapsone is prescribed to the patient for more than 4 weeks.

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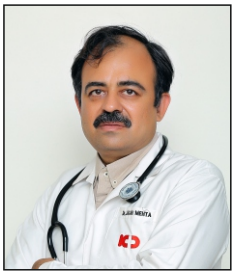

Dr Jigar Mehta
DA, MD Critical Care &
Intensive Care

Dr Anand Desai
MS General Surgery

Dr Kartik Desai
MD Medicine,
DNB Gastroenterolgy

Urinary Tract Infection With Nontyphoidal Salmonella

Dr Hardik Yadav, Dr Wasimahmed Sachora

Case Report

Abstract
Urinary Tract Infection (UTI) caused by Salmonella is very rare and occurs mainly in immunocompromised patients, infants and those over 60 years of age [6]. We present a case of 52-year-old male having urinary tract infection and benign prostatic hyperplasia.

Introduction

Non-typhoidal *Salmonella* is a rare cause of urinary tract infections in children and adults [1-5]. Escherichia coli has been found as the most common uropathogenic bacteria. The second most common uropathogenic agent has been shown to be Klebsiella pneumoniae. The third uropathogenic agent varied during the different seasons. Streptococcus spp. (separated apart from Streptococcus D group), Staphylococcus epidermidis, Pseudomonas aeruginosa, and Enterococci were the third pathogens in different periods [8]. Another study showed that major pathogens implicated in UTI are Escherichia coli (28.5%), Staphylococcus aureus (28.0%), Salmonella spp (22.8%) and Pseudomonas aeruginosa (20.5%) [9].

Bacteriuria due to Salmonella typhi usually occurs following recent typhoid fever or in chronic carrier states. Localized abnormalities of the urinary tract and kidneys (urolithiasis, prostatic hypertrophy, and tuberculosis) and also systemic diseases were found to predispose patients to S. typhi bacteriuria [10].

Urinary tract infection caused by nontyphoid salmonella (NTS) is rare. Common symptoms include cystitis, pyelonephritis. Generally, the patients have urologic abnormalities, are immunocompromised or elderly, have chronic diseases, diabetes mellitus, or are undergoing immunosuppressor treatment.

A review of cases in which salmonella involved the urinary tract indicates that this infection usually occurs in patients who are structurally or immunologically compromised. Recurrence is expected and the treatment plan should include an extended course of antibiotic therapy [11-12].

Case

A 52-year-old male patient presented with chief complaints of abdominal pain, fever with chills for 15 days. The patient also revealed voiding difficulty since 2-3 days with poor stream and intermittency.

On examination, his pulse was 80/min, blood pressure was 100/70 mm Hg, random blood sugar was 114 mg/dL. His respiratory system was clear and abdomen was found to be soft and tender. The patient was conscious and oriented. The patient was referred to urology specialist, who ordered his laboratory investigations, which showed a total count of 17,300 with serum PSA 14 ng/mL and serum creatinine 1.0. The patient's CT scan of the abdomen was unremarkable. The patient was initially suspected to have bilateral hydronephrosis with benign prostatic hyperplasia (BPH) and febrile UTI. The patient's urine culture showed colonies of Salmonella.

The was put on Foley's catheterization to facilitate urine output. He was treated on the course of injection Zostum 3 gm for his UTI and injection Febrinil 150 mg for pain and fever. He was also started on tablet Veltam for his BPH. On his follow-up visit, the patient was asymptomatic with no other complaints.

Discussion

A 52-year-old male patient presented with chief complaints of abdominal pain, fever with chills for 15 days. The patient also revealed voiding difficulty since 2-3 days with poor stream and intermittency.

Non-typhi Salmonella enterica urinary tract infections (UTIs) are not frequent and rarely reported in the literature [11-12]. Non-typhoidal Salmonella (NTS) urinary tract infections were found to represent only 0.63% of all Salmonella infections in large retrospective reviews.[1,2]

Salmonella UTIs are frequently associated with chronic diseases, immunosuppression or structural abnormalities of the genitourinary tract. A focused history and relevant physical examination are always warranted [15]. Clinical presentations were acute pyelonephritis, acute cystitis, and prostatitis [11-12].

Prolonged antibiotic therapy (2 weeks or longer) and follow-up urinary cultures are necessary due to recurrence or chronic asymptomatic bacteriuria [15].

Conclusion

Nontyphoidal *Salmonella* urinary tract infection is rare and should arouse suspicion of underlying immunosuppression or genitourinary abnormalities that can include BPH. A prolonged course of antibiotics is generally needed for NTS urinary tract infection [7].

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Dr Hardik Yadav
MS, Surgery,
MCh Urology

Dr Wasimahmed Sachora
MD Medicine

Pregnancy Outcomes Post Bariatric Surgery - A Single Centre Retrospective Study

Dr Manish Khaitan, Dr Riddhish Gadani, Dr Koshish Nandan Pokharel

Case Report

Abstract

Bariatric surgery presently is the best possible intervention for the treatment of severe obesity and its related conditions. This study presents retrospective data on the pregnancy outcomes of Indian patients who underwent bariatric surgery before conception.

Methodology

This is a single centre, retrospective, observational study. Data on demographics, pre-surgery weight, body mass index (BMI), types of bariatric surgery, weight at conception, weight gain during pregnancy, type of delivery and the health of the baby were collected and analysed to study the weight loss pattern and pregnancy outcomes in female patients of childbearing potential.

Results

The study included 34 women of childbearing potential (BMI>30 kg/m2) who underwent bariatric surgery. The study population was followed up from the time of surgery till one-year post-delivery of the baby. The mean weight gain during the pregnancy was 14.9±5.4 kg. 23 underwent LSCS and the rest had a normal delivery with the mean baby weight of 2.5±0.4 kg. Six babies required neonatal intensive care. In our series, only 4 of 35 cohorts that were only 11% had substantial weight retention (range 5-13 kgs) at the end of 12 months which is significantly lower than the normal cohorts who did not undergo bariatric surgery.

Introduction

Infertility, both primary and secondary is a concern worldwide. As per the WHO; one in every four couples in developing countries are affected by infertility and primary infertility in India is between 3.9 - 16.8% [1]. Female infertility is due to many causes, e.g., damage to the fallopian tubes disturbed ovarian function/ hormonal causes – polycystic ovarian syndrome; functional hypothalamic amenorrhea, diminished ovarian reserve or premature ovarian ageing, premature ovarian insufficiency; uterine causes -abnormal anatomy of the uterus; the presence of polyps and fibroids, and cervical causes [1–3]. Other factors that may affect pregnancy in women are age, smoking, alcohol use, stress, poor diet, diabetes, being significantly overweight or underweight and history of certain sexually transmitted diseases [4].

Obesity has risen as a major lifestyle disease affecting both men and women alike. It has been associated with female infertility as well as complications during pregnancy [5]. Maternal obesity (≥ 30 kg/m2) is known to have severe implications in both the mother's health (gestational diabetes, preeclampsia, long-term vascular dysfunction, miscarriages, preeclampsia, thromboembolism, intrauterine growth restriction (IUGR) and post-partum haemorrhage) and health of the child (congenital anomalies, premature birth, stillbirth, large for gestational age, perinatal mortality) [6–9]. To mitigate the effect of obesity on infertility and long term maternal and offspring health, many interventions have been tried; these include, change in lifestyle, counselling, exercise and physical activity, dietary changes, pharmacotherapy and also, bariatric surgery [9–11].

Bariatric surgery is one of the most effective long-term weight loss therapies in patients with obesity that cannot be managed easily by routine interventions. It has been observed that majority of the patients who undergo bariatric surgery are women and about 80% of them are of childbearing potential [11]. It is also known to reduce risks to both the mother and the offspring [9], however, there are a few studies that differ in the findings [12–15]. Here, we investigated the pregnancy outcomes of a cohort of female patients with childbearing potential who underwent bariatric surgery at a single centre; the surgery was performed by a single surgeon and with follow-up till one-year post-delivery.

Methods

This was a single centre retrospective, observational study conducted with the approval from the Ethics Committee; consent was taken from the patients at the time of the procedure. The study aimed to investigate the effects of weight loss on pregnancy outcomes. It included all female patients of childbearing potential between the age group of 18 to 45 years, who underwent any type of bariatric surgery between the years 2010 to 2018 and who subsequently conceived a child. Those patients who underwent additional bariatric surgeries, those who did not have complete clinical data/ lost to follow-up were excluded. All the surgeries were performed by a single surgeon.

The demographic data, pre-operative weight, body mass index (BMI), excess weight, percentage excess weight loss (%EWL), type of bariatric surgery, weight at conception (at the time of confirmation of pregnancy), weight during and post-pregnancy, type of delivery, polycystic ovary syndrome (PCOS)/ infertility status before and after bariatric surgery, gestational period, gestational diabetes, eclampsia, gestational hypertension, baby weight, macrosomia, small for gestational age, preterm birth, neonatal intensive care unit (NICU) requirements and health, time taken to reach original weight post-pregnancy were collected from the patient files and these were used as the parameters to study the outcome of bariatric surgery in women of childbearing age.

On discharge post-delivery, the patients were counselled again on the need to follow the strict diet as stipulated by the dietician, regular exercise/ lifestyle modifications to achieve the best results for the surgery and they were also asked to follow contraceptive measures for at least one year, this was to allow stabilisation of the weight and nutrition before they could conceive and to avoid any complications to the mother and child. Patients were reviewed in OPD visits or through telephone, emails, and WhatsApp. Details of pregnancy were collected from patients ANC charts and discharge summaries.

Statistical analysis

All the data is presented as percentage or numbers or the mean and SD. One-way ANOVA was used to compare quantitative variables across the time points. $p < 0.05$ was considered as statistical significant unless specified. The data visualization and statistics were performed using GraphPad Prism Version 8.0.

Results

A total of 1246 surgeries were performed during the study period between 2010 and 2018. There were 847 females (68%) out of which 220 (26%) were in the childbearing age group and 34 females met our inclusion criteria. The mean age of the cohort at the time of surgery was 27.7 ± 5.0 years (Range: 19 – 40 years) and among them, the majority (70.6%) were between the ages of 20 and 29 years. Approximately 73.5% (n=25) patients underwent laparoscopic sleeve gastrectomy (LSG), 20.6% (n=07) underwent Roux-en-Y Gastric Bypass (RYGB) and 5.9% (n=02) underwent one-anastomosis gastric bypass (OAGB). The mean duration between the bariatric surgery and conception was 32.8 ± 17.1 months (Range 9 – 74 months).

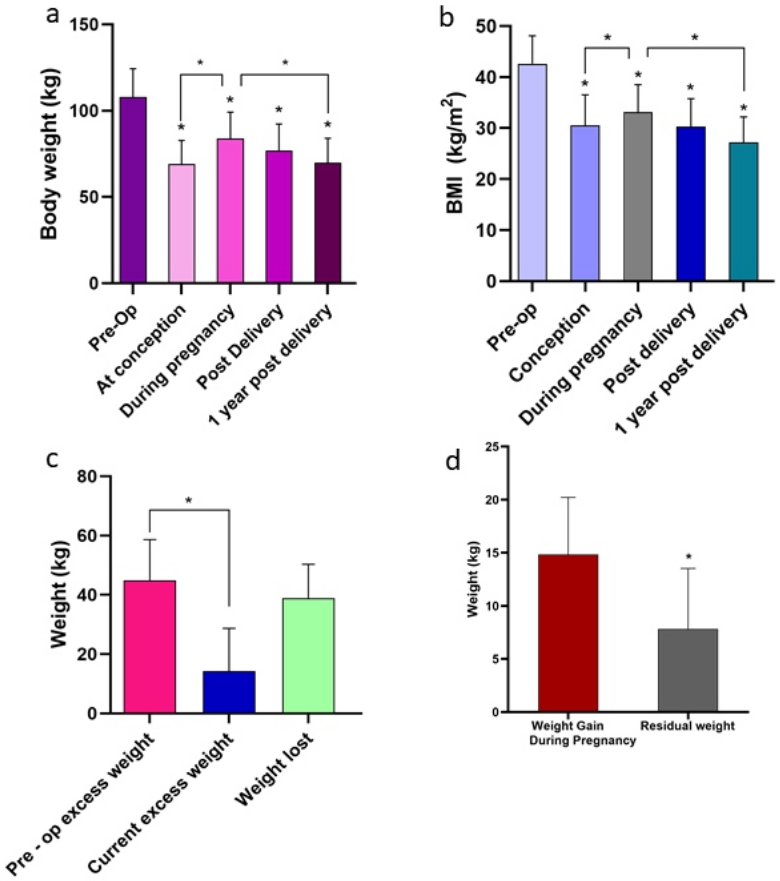

Fig.1. Demonstration of the changes in the (a) body weight, (b) BMI, (c) excess weight and (d) weight gain and residual weight at one year post -delivery in the study cohort (n=34). * indicates significant difference between the groups

Bodyweight, BMI, Weight Pattern During Pregnancy and Post-Delivery

The mean pre-operative weight of the cohort was 107.9 ± 16.5 kg (Range 78.0 – 134.2 kg), with the mean excess weight of 44.8 ± 13.8 kg (Range 15.5 – 66.3 kg) and mean BMI was 42.6 ± 5.5 kg/m2 (Range 30.5 – 52.8 kg/m2) (Table1). Majority of the women (88.2%, n=30) had BMI > 35 kg/m2 and among them, 70% (n=21) had BMI > 40 kg/m2. A significant reduction in the BMI was attained post-surgery and the mean BMI at the time of diagnosis of pregnancy was 27.3 ± 5.0 kg/m2 (Range: 20. 5 – 39.0 kg/m2). 67.6% (n=23) women were with BMI< 30 kg/m2at the time of detection of pregnancy, 50.0% (n=17) had a BMI between 20-25 kg/m2 and 17.6% (n=6) had BMI < 30 kg/m2, however, there were three patients with BMI above 35 kg/m2 (Range 35.8 – 39.0 kg/m2). The mean %EWL at detection of pregnancy was 91.5 ± 27.0% (Range: 41.8 – 154.8%). The mean weight of the cohort during the third trimester was 83.9 ± 15.2 kg (Range 56.0 – 110.0 kg). During the pregnancy, women gained weight in the range of 6.0 – 26.0 kg with cohort mean of 14.5 ± 5.2 kg. One year after the delivery, the residual weight in the cohort ranged from -3.0 kg to +20 kg with a mean of 7.8 ± 5.7 kg. The mean BMI post-delivery at one year was 27.5 ± 5.1 kg/m2 (Figure 1). Approximately 38% (n=13) reached the original weight (lowest weight at detection of pregnancy) within six months, 32% (n=11) in less than a year and 29% (n=10) did not reach the lowest weight even after one-year post-delivery

Table 1: Details of the body weight, BMI, weight pattern post-bariatric surgery, during pregnancy and post-delivery. (n=34)

Details	Mean ± SD	Median	Range
Pre-operative weight (kg)	107.9 ± 16.5	108.5	78.0 – 134.2
Body Mass Index (BMI) (kg/m^2)	42.6 ± 5.7	43.0	30.5 – 52.8
Excess weight (kg)	44.8 ± 13.8	47.4	15.5 – 66.3
Weight at detection of pregnancy (kg)	69.1 ± 13.8	67.5	45.0 – 98.0
%Excess weight loss (%EWL) at detection of pregnancy (%)	91.5 ± 27.0	92.1	41.8 – 154.8
Weight during 3rd trimester kg	83.9 ± 15.2	83.0	56.0 – 110.0
Weight after delivery	76.9 ± 15.4	74.0	45.0 – 101.0
Weight gain during pregnancy (kg)	14.9 ± 5.4	13.5	6.0 –26.0
Current weight(Oct - 2019) (kg)	77.3 ± 16.4	74.0	50.0 – 115.0
Current Excess weight (kg)	14.3 ± 14.4	10.2	-5.6 – 51.0
Duration for delivery from DoS (months)	42.9 ± 18.9	39.5	18.0 – 82.0

DoS: Date of surgery

Anaemia was treated with intravenous iron sucrose and folic acid supplements followed by maintenance with oral ferrous fumarate and folic acid supplements with regular follow-up. No case of gestational diabetes or hypertension was reported in the cohort.

Pregnancy and Birth Outcomes

In the study cohort, only five patients (14.7%) who had reported infertility, PCOS or both pre bariatric surgery, required assisted reproductive therapy (ART), and the procedure included *in vitro* fertilization (IVF). Among the patients, 67.6% (n=23) underwent lower (uterine) segment caesarean section (LSCS) delivery, whereas, the rest had a normal delivery. No complications were seen in any of the patients during delivery. Two patients delivered twins. There were three pre-term births and all the births were live and no baby had any congenital defects. Six babies (17.6%) were admitted to NICU, of which three were admitted due to prematurity and the other three including one pair of twins due to low birth weight. The mean birth weight was 2.5 ± 0.4 kg (Range 1.8 – 3.2 kg). No baby was big for gestational age in this cohort.

Discussion

Obesity is one among the many factors that affect the fertility in women, however, there are still cases where infertility remains unexplained [16]. Higher BMI is known to have an adverse effect on reproductive health as these women who are overweight/ obese are known to have a higher incidence of menstrual dysfunction and anovulation. An impaired ovulatory function may be associated with the gonadotropin secretion which is affected by increased peripheral aromatization of androgens to estrogens in women who are obese [17]. Bariatric surgery is known to have a positive effect on the fertility of women and pregnancy outcomes; however, there are contradicting reports across studies [12–15,18]. Post-bariatric surgery, patients lose significant excess weight and depend on their compliance with the follow-up guidelines including exercise and lifestyle modifications. In this cohort, at the time of bariatric surgery, the mean pre-op BMI was 42.6 kg/m2 and at the time of detection of pregnancy, it was reduced to 30.5 ± 5.0kg/m2. This is in corroboration with some of the published studies [12,19,20].

Age plays an important role in fertility and it is well known that there is a decrease in fertility with ageing. The mean age of the cohort at conception was 30.2 ± 4.5 years (range 19.3 – 40.8 years). The age, at which the cohort conceived majorly falls in the lower to the mid spectrum of the reproductive age, only three women were above the age of 37 years. This may have been one of the factors for the success of spontaneous conception and comparatively successful results in this cohort. The age at conception seen in this cohort is consistent with the age of the cohorts that are earlier reported for pregnancy outcomes post-bariatric surgery [12,13,19,20]. The ideal timeline for conception after bariatric surgery is suggested as at least 12-18 months post-surgery or at least till the weight loss is stabilised [11,13,21]. This is to avoid SGA (small for gestational age) neonates that require care/ time in the neonatal intensive care. This gap is usually suggested so that the body is well adjusted and prepared for pregnancy, it may allow for lower rates of miscarriages, malnourished foetus resulting in complications like low birth weight or malformation [13,22]. One study reported a comparable short-term perinatal outcome such as congenital malformations or bariatric complications was seen in patients who conceived within the first postoperative year compared to those who conceived after the first postoperative year [21]. There were two cases in this cohort where the conception was < 12 months post-bariatric surgery. Although the pregnancies were earlier than recommended, the babies were not SGA and did not require any special neonatal care, however, the delivery was through LSCS in these cases. They had a preoperative BMI of 31.2 and 42.5 kg/m2 respectively, underwent RYGB surgery for weight reduction; at conception, they were 37.8 years old with BMI of 21.1 kg/m2 and 40.8 years old with BMI of 24.8 kg/m2.

Maternal Outcomes

One of the benefits of bariatric surgery is resolution or reduction in the severity of co-morbidities. A few cases of diabetes mellitus (n=5) and hypertension (n=1) were reported in the cohort before they underwent bariatric surgery. Post-surgery, the patient with hypertension continued with medication and diabetes mellitus was resolved in three patients while two patients continued on medication. Gestational diabetes, hypertension and preeclampsia are usually seen in obese women [8] and bariatric surgery has been known to reduce the risk of gestational diabetes [13,23–25]. No cases of gestational diabetes or preeclampsia in this cohort during the term of pregnancy were observed. Stone et al, observed that if the person was non-obese during conception post-bariatric surgery, then they had a lower risk of developing hypertension during pregnancy 8.0% vs. 36.5% [26]. It has been reported that women who underwent bariatric surgery had lower rates of hypertensive disorders during pregnancy [23,24,27].

Mode of Delivery

There is a higher rate of LSCS (almost 64%) in our series as compared to normal delivery and such observations have been seen in women who underwent bariatric surgery, compared to the general population

[26,28] The deliveries were done in different hospitals and there may be caregiver bias, Khan et al, in their review suggested that even though there may be no physiological reason, caregiver bias may contribute to elevated LSCS rate in women who had previously undergone bariatric surgery.[29]

Co-Morbidities and Gestational Complications

The major reported co-morbidities in the cohort before surgery were: PCOS, infertility, diabetes mellitus, hypertension, dilated cardiomyopathy (DCM), dyslipidemia, hypothyroidism and depression. Among the 73.5% (n=25) of the cohort who had co-morbidities, 75.0% had complete resolution of all the co-morbidities after surgery and before conception. In the case of multiple co-morbidities, some of the co-morbidities such as diabetes mellitus, PCOS and infertility were resolved. Two patients who had diabetes were controlled on a single drug, one patient each with hypothyroidism and dilated cardiomyopathy continued on medications (Table 2).

The patients were on nutritional supplements as stipulated by the dietician and the treating doctor. Complications or co-morbidities during pregnancy was observed in 23.5% (n=8) of the cohort. The complications included a case of haemorrhoids, two cases each of abdominal pain and anaemia. One patient was detected to have hypothyroidism during the 8th month of pregnancy, whereas, one reported spotting in the fifth month and was advised bed rest to avoid any adverse events because of the previous pregnancy.

Table 2: Co-morbidities before and after bariatric surgery in the study cohort

Co-morbidities*	Before bariatric surgery n (%) (n=34)	Resolved post bariatric surgery n (%)**
PCOS	18 (52.9%)	16 (88.9%)
Infertility	12 (35.3%)	09 (75%)
Diabetes Mellitus (DM)	05 (14.1%)	03 (60%)
Hypertension (HTN)	01 (2.9%)	-
Depression	02 (5.9%)	02 (100%)
Dyslipidemia	02 (5.9%)	02 (100%)
Hypothyroidism	01 (2.9%)	-
Anemia	01 (2.9%)	-
Dilated cardiomyopathy	01 (2.9%)	-

* Some patients presented with multiple co-morbidities.**calculated on the basis of total number of patients with corresponding co-morbidities

[26,28] The deliveries were done in different hospitals and there may be caregiver bias, Khan et al, in their review suggested that even though there may be no physiological reason, caregiver bias may contribute to elevated LSCS rate in women who had previously undergone bariatric surgery.[29]

Gestational Weight gain

The gestational weight gain was varied in the cohort from 6 – 26 kg. As reported in a study, pregnancy post-LAGB does not affect %EWL[30]. Rottenstreich et al, reported that the time to conception from surgery, gestational weight gain was not found to be associated with %EWL post-bariatric surgery [31].

Postpartum Weight Retention and Substantial Weight Retention

Postpartum weight retention is known as the weight change from preconception and the first year postpartum; this includes the weight gain during gestation, early postpartum weight loss (6 weeks postpartum), and later postpartum weight changes (after 6 weeks postpartum)[32]. The residual weight in the cohort ranged from -3.0 kg to +20 kg post-delivery, the maximum percentage of women (38.2%) could attain the original weight within six months post-delivery. It was also noted that 29.4% of the women could not attain their original weight whereas 70.6% could achieve the original weight in one year.

Substantial weight retention (SWR)is defined as post-pregnancy weight retention of >5 kg above pregravid weight. Keppel et al reported >20% SWR, Gunderson et al, 2001 reported 18% SWR, similarly Olson, 2003 also reported approximately 20% SWR in their studies of normal cohorts. In our series, only 4 of 35 cohorts that are only 11% had substantial weight retention (range 5-13 kgs) at the end of 12 months which is significantly lower than the normal cohorts who did not undergo bariatric surgery. Data is not readily available in the literature regarding postpartum weight retention after bariatric surgery. [32].

Neonatal Outcomes

Maternal obesity is known to play a significant role in neonatal outcomes. Three pre-term births were recorded in this cohort and hence bariatric surgery doesn't seem to affect the term of the pregnancy. There are conflicting reports in the literature regarding the association of bariatric surgery with pre-term birth [14]; some suggest that there is an increased risk of prematurity in women who underwent pre-pregnancy bariatric surgery [13–15,33]. However, others report no difference in the rate of prematurity between women who underwent bariatric surgery and women who were obese[12]. Maternal obesity and gestational diabetes are often associated with the increased incidence of macrosomia or large for gestational age of the foetus[14,18,34]. No case of macrosomia was reported in this cohort. Other concerns include low birth weight, SGA and requirement for NICU among the neonates of obese women with or without bariatric surgery [12,35]. Studies involving 32 (59.4% normal birth weight) and 81 pregnancies have reported that majority of the neonates had normal birth weight [36,37] post-bariatric study, this is in corroboration with the findings of our study. Though studies show a higher incidence of NICU admissions in post-bariatric surgery births compared to those who did not undergo surgery [10,19], however, contrast to this no difference in the rate of admission to NICU was observed in women who remained obese at conception to those who were non-obese after bariatric surgery [26]. In our cohort, six babies were admitted to NICU support.

Limitation of this study is that it involved pregnant women who underwent bariatric surgery and did not have a control group of obese women and also restricted to a single centre. However, the data suggest improvement in fertility and pregnancy-related issues and neonatal outcomes after bariatric surgical procedures. These findings will help other centres as evidence on the safety of pregnancy in women who are obese and opt for weight loss surgery to improve fertility issues.

Conflict of Interest

All authors declare that they have no conflict of interest.

Statement of Human and Animal Rights

This study was performed following the principles of the declaration of Helsinki and was approved by the Institutional Ethical Committee.

Conclusion

Bariatric surgery improves fertility with safe pregnancy and its outcomes in terms of preeclampsia, eclampsia, gestational diabetes, premature rupture of the membranes (PROM), postpartum haemorrhage (PPH) and puerperal sepsis in women with childbearing potential and safe for offspring in terms of shoulder dystocia, macrosomia, birth asphyxia and perinatal mortality. However, they should be well aware of the risks associated with bariatric surgery especially the mal-absorptive procedures.

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Dr Manish Khaitan
MS General Surgery, FAIS

Dr Riddhish Gadani
DNB General Surgery

Dr Koshish Nandan Pokharel
MS General Surgery

Rectal Polyps: Could It Be Solitary Rectal Ulcer Syndrome?

Dr Anand Desai, Dr Kartik Desai

Case Report

Abstract

Solitary rectal ulcer syndrome (SRUS) is an uncommon benign condition, which can imitate numerous different infections due to their likenesses in clinical, endoscopic and histological highlights.

Introduction

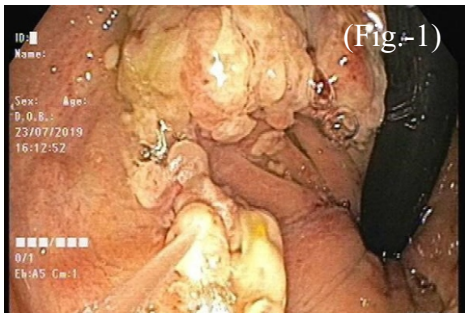
We present a case of a young male patient having chronic constipation of years, practising self-digitation. With the increase in his Bristol stool scale from 1-2 to 6-7, the patient required further investigation with colonoscopy and endoscopy to rule out various other conditions. SRUS can be a misnomer as the condition can manifest in various manners and just a minority of patients has a singular ulcer. Different discoveries incorporate numerous ulcers, hyperaemic mucosa or a wide-based polypoidal mass. For this condition, an uncommon presentation of SRUS as a polypoidal solitary rectal ulcer was affirmed by histology.

Case

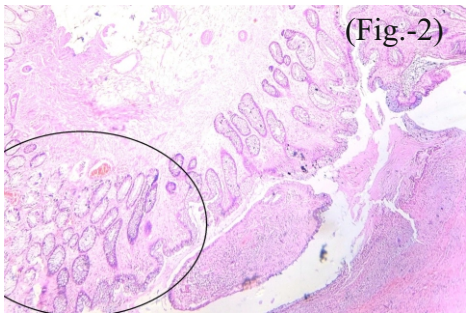
A 24-year-old male presented with a history of constipation for 10 years. Associated symptoms included straining while passing the stool, inadequate evacuation, and Bristol stool scale 1-2. The patient was taking purgatives to relieve his symptoms of constipation.

The patient had a history of self-digitation due to difficulty with defecation. He had watery stools with a frequency of 3-4 times a day with change in Bristol stool scale to 6-7 for the past 4-5 months. He developed bleeding per anus along with white coloured mucus discharge. The blood was fresh red in colour, the quantity being a few drops.

His general examination noted to have the presence of pallor and digital rectal examination showed a polypoidal mass. His abdominal examination was unremarkable. His laboratory evaluation showed the presence of iron deficiency anaemia with haemoglobin of 6.9 g/dl. The patient underwent colonoscopy, which showed multiple polypoidal lesions just above the dentate line (Fig.-1), the largest one being 2 cm in size. He also had multiple ulcers of 1-2 mm size with erythema of surrounding mucosa in the recto-sigmoid segment.



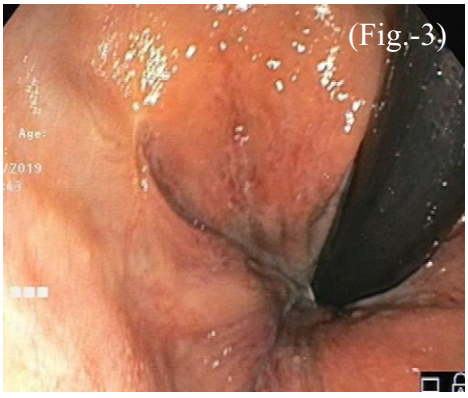
(Fig.-1)


(Fig.-2)

The patient underwent endoscopic polypectomy for the same and the histology showed solitary rectal ulcer (Fig.-2). His colonic mucosal biopsy showed solitary rectal ulcer morphology as well.

He was recommended to have plenty of fluid orally and a high-fibre diet. He was started on oral iron. The patient was explained about habit modifications in defecation like to avoid straining while passing stool and use of a finger for the evacuation of stool. He was given lactitol and psyllium combination as a purgative along with Mesalamine suppositories.

On a one month follow up, he had no bleeding, his stool frequency reduced up to 1-2 per day and his haemoglobin increased up to 8.2 g/dl. His follow-up colonoscopy showed a scar mark of polypectomy (Fig.-3) with the rest of the area of the mucosa being normal.


(Fig.-3)

Discussion

SRUS is a poorly understood syndrome that was originally described in 1829 since Cruveihier reported four cases of unusual rectal ulcers[9]. The term "SRUS" was widely accepted after the initial use by Madigon and Morson[6] in the late 1960s. This syndrome usually manifests as rectal bleeding, prolonged excessive straining, copious mucus passing and abdominal pain[10].

The clinical presentation of SRUS is variable. Histology is most important to the diagnosis of SRUS. It present with fibromuscular obliteration of lamina propria, crypt distortions and serrated surface in histology [2].

In adults, SRUS can present as a polypoidal mass in one forth of patients[3,4]. This appearance may do confusion with an inflammatory polyp, hyperplastic polyps, or rectal carcinoma[4,5]. Ulcers and polyps have been the common endoscopic findings in 90% of patients[10,11]. However, some of the clinical and endoscopic presentations in SRUS patients can be completely nonspecific, and up to 26% of patients may be asymptomatic[12,13]. Hence, it is difficult to distinguish SRUS from malignancy or other diseases based on symptoms, endoscopic features or image findings[14].

Our patient had multiple polypoidal lesion with a smooth overlying surface, which mimics inflammatory polyps. Per rectal therapy in form of mesalamine, steroids or sucralfate is effective[6,7,8].

Conclusion

The presence of rectal polypoidal mass always has high suspicion of SRUS in the younger age group. A good clinical history and histopathological findings can rule out other similar conditions.

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Dr Anand Desai
MS General Surgery

Dr Kartik Desai
MD Medicine,
DNB Gastroenterolgy

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Air In The Space: Spontaneous Pneumothorax

Dr Vivek Ambalia, Dr Arpit Khambhalia, Dr Pooja Nanda, Dr Suhani Patel

Case Report

Abstract

A 31-year-old male presented to the emergency department with cardiac arrest and was promptly diagnosed to have spontaneous pneumothorax clinically and radiologically. The patient was revived and managed successfully. Clinical picture improved within 48 hours and the patient was discharged walking home asymptomatic.

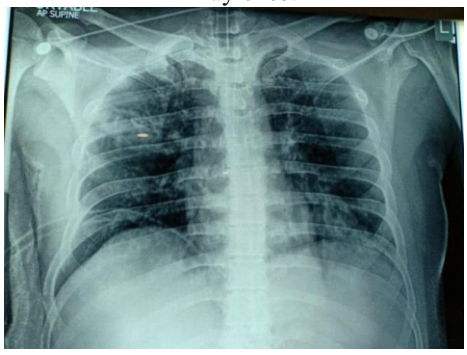
Introduction

A multitude of respiratory disorders has been described as a cause of spontaneous pneumothorax. The most frequent underlying disorders are chronic obstructive pulmonary disease with emphysema, cystic fibrosis, tuberculosis, lung cancer and HIV-associated primary spontaneous pneumothorax (PSP), followed by more rare but "typical" disorders, such as lymphangioleiomyomatosis and histiocytosis X.[1]Because lung function in these patients is already compromised, secondary spontaneous pneumothorax (SSP) often presents as a potentially life-threatening disease, requiring immediate action. The general incidence is almost similar to that of PSP.[2,3] Depending upon the underlying disease, the peak incidence of SSP can occur later in life, eg: 60-65 years of age in the emphysema population.[4] The typical symptoms of chest pain and dyspnoea may be relatively minor or even absent so that a high index of initial diagnostic suspicion is required. Many patients (especially those with PSP) therefore present several days after the onset of symptoms. The longer this period, the greater is the risk of re-expansion pulmonary oedema (RPO). In general, the clinical symptoms associated with SSP are more severe than those associated with PSP, and most patients with SSP experience breathlessness that is out of proportion to the size of the pneumothorax.[4] These clinical manifestations are therefore unreliable indicators of the size of the pneumothorax. When severe symptoms are accompanied by signs of cardiorespiratory distress, tension pneumothorax must be considered.

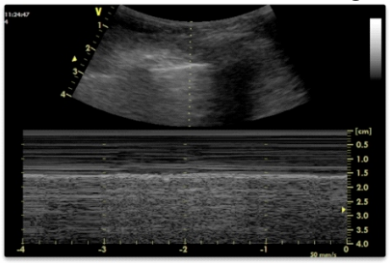
Case

A 31-year-old male patient presented to the emergency department (ED) with cardiorespiratory arrest. The patient was unconscious for 10 minutes before arrival to the ED. On arrival to the ED, CPR was started immediately and tracheal intubation was performed. After approximately 4 minutes of aggressive resuscitative measures, the patient was revived with following vitals: pulse 180/min, blood pressure - 160/90 mm Hg, partial pressure of oxygen (SpO_2) - 40% with 100% fraction of inspired oxygen (FiO_2), respiratory rate (RR) - 22/min (assisted ventilation), random blood sugar (RBS) - 110 mg/dL, pupils - B/L 3mm equal and sluggishly reacting to light. On careful systemic examination, air entry on the right side lung field was significantly reduced. Despite performing various airway manoeuvres, O_2 saturation did not improve to a satisfactory level. The patient again went into cardiac arrest after approximately 5 minutes. Aggressive resuscitation was continued and reversible causes of cardiac arrest were sought for. Bedside lung ultrasound was done immediately which showed absent lung sliding (barcode sign) on the right side, suggestive of Pneumothorax. ABG was suggestive of severe combined respiratory and metabolic acidosis with hypoxia. With reference to above mentioned findings, right side needle thoracocentesis was performed followed by intercostal drainage tube placement. Tube placement was confirmed with X-ray chest and the patient was revived with following vital parameters - pulse 140/min, blood pressure 150/80 mmHg SpO_2- 95% with FiO_2 100%, RR - 22/min (assisted ventilation) GCS -E1VtM1. RT insertion was done and red coloured aspirate was noted. Critical care and gastroenterology opinion was taken and the patient was admitted to ICU.

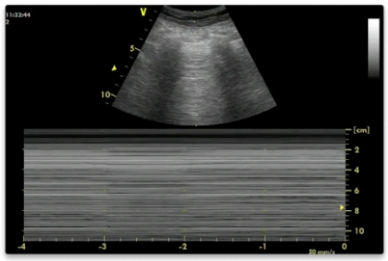
X-Ray chest



Lung Ultrasound



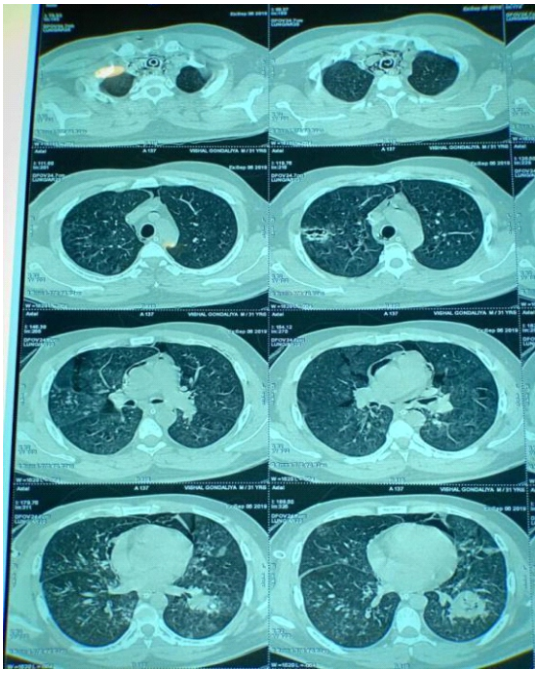
Seashore sign



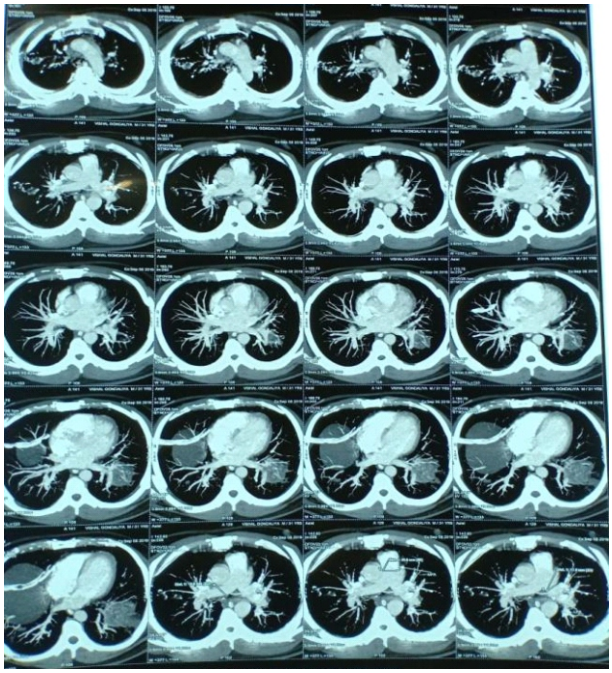
Barcode sign

On detailed history taking, it was elicited that the patient had around 3-4 episodes of haematemesis in 15 minutes followed by vigorous coughing prior to arrival. History of fever with coughing and hoarseness of voice of 7 days.

During hospitalization, various investigations were carried out. CBC indicated Hb- 10.9 gm%, WBC - 28000 cells, platelets - 4,63,000 and normal coagulation profile. Upper GI endoscopy was performed on the following day which suggested pan-gastritis and no obvious bleeding source identified. Furthermore, CT thorax with pulmonary angiography was done which was suggestive of minimal residual right-sided pneumothorax with right-sided intercostal drainage (ICD) tube in situ, and multiple areas of consolidation with cavitary changes were noted. There was no evidence of pulmonary thromboembolism or pulmonary arterial hypertension.



CT Thorax



CT Pulmonary angiography

The patient was treated with blood transfusions, IV antibiotics and supportive care. The ICD tube was removed and the patient weaned off gradually from the mechanical ventilator. The patient recovered on a course of treatment uneventfully and was discharged in hemodynamically stable condition.

Discussion

Spontaneous pneumothorax is the sudden onset of a collapsed lung without any apparent cause, such as a traumatic injury to the chest or known lung disease. A collapsed lung is caused by the collection of air in the space around the lungs.

PSP has an incidence of 7.4 to 18 cases (age-adjusted incidence) per 100,000 population in males, and 1.2 to 6 cases per 100,000 population in females each year.[2,3] PSP typically occurs in tall, thin subjects. Other risk factors are male sex and cigarette smoking.[5] Contrary to popular belief, PSP typically occurs at rest; avoiding exercise, therefore, should not be recommended to prevent recurrences. Precipitating factors may be atmospheric pressure changes (which may account for the often observed clustering of PSP)[6] and exposure to loud music.[1] PSP has an incidence of 7.4 to 18 cases (age-adjusted incidence) per 100,000 population in males, and 1.2 to 6 cases per 100,000 population in females each year.[2,3] PSP typically occurs in tall, thin subjects. Other risk factors are male sex and cigarette smoking.[5] Contrary to popular belief, PSP typically occurs at rest; avoiding exercise, therefore, should not be recommended to prevent recurrences. Precipitating factors may be atmospheric pressure changes (which may account for the often observed clustering of PSP)[6] and exposure to loud music.[1]

Subpleural blebs and bullae are found at the lung apices at thoracoscopy and on CT scanning in up to 90% of cases of PSP.[7,8] Almost all patients with PSP report a sudden ipsilateral chest pain, which usually spontaneously resolves within 24 hours.[9] Dyspnoea may be present but is usually mild. A physical examination can be normal in small pneumothoraces. In larger pneumothoraces, breath sounds and tactile fremitus are typically decreased or absent, and percussion is hyper-resonant. Rapidly evolving hypotension, tachypnoea, tachycardia and cyanosis should raise the suspicion of tension pneumothorax, which is, however, extremely rare in PSP.

Secondary spontaneous pneumothorax (SSP) is associated with underlying lung disease.SSP is associated with higher morbidity and mortality than PSP. Strong emphasis should be placed on smoking cessation to minimise the risk of recurrence. Symptoms in PSP may be minimal or absent. In contrast, symptoms are greater in SSP, even if the pneumothorax is relatively small in size. The presence of breathlessness influences

the management strategy. Severe symptoms and signs of respiratory distress suggest the presence of tension pneumothorax.[4]

Diagnosis can be confirmed in the majority of cases on an upright posteroanterior (PA) chest radiograph, which also allows an estimation of the pneumothorax size with good accuracy.[10] In cases with a small PSP, computed tomography (CT) may be necessary to diagnose the presence of pleural air. Routine expiratory chest radiographs are useless.

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Dr Vivek Ambalia
MD, MRCEM
Emergency Medicine

Dr Arpit Khambhalia
MD, MRCEM
Emergency Medicine

Dr Pooja Nanda
MD, MRCEM
Emergency Medicine

Dr Suhani Patel
MRCEM
Emergency Medicine

Anaesthesia Management In Patient With Eisenmenger Syndrome Coming For Non-Cardiac Surgery

Dr Tejaswini Sheth, Dr Hemaxi Ambani

Case Report

Abstract

Eisenmenger syndrome (ES) is a condition resulting from a long-standing cardiac shunt due to a congenital heart defect. It is one of the leading causes of perioperative death (upto 19%) in patients undergoing non-cardiac surgery. The decreased systemic vascular resistance associated with either general anaesthesia or neuraxial blockade increases the degree of right to left shunting, thereby exposing the patient to substantial risk. Here, we present anaesthetic management of two non-cardiac cases with Eisenmenger syndrome. Both the patients were successfully anaesthetised with an uneventful postoperative period and discharged with stable haemodynamic condition.

Introduction

Congenital heart disease (CHD) accounts for 28% of all congenital anomalies.[1] Nearly 8% of patients with CHD and 11% of those with the left to right shunts develop Eisenmenger syndrome.[2,3] Eisenmenger syndrome refers to any untreated congenital cardiac defect with intracardiac communication that leads to pulmonary hypertension, reversal of flow, and cyanosis. Most Eisenmenger patients die from sudden cardiac death, CHF, haemoptysis, cerebral abscesses, thromboembolic events, from complications during pregnancy or due to non-cardiac surgery.[4]

Case 1

An 82-year-old female patient weighing 43 kgs with a history of right-sided intertrochanteric fracture of femur was posted for proximal femur nailing (PFN). She was diagnosed with an atrial septal defect (ASD) 20 years ago and was on medications including cardiac glycosides, beta-blocker, calcium channel blocker, diuretics, and antiplatelet drugs. Pre-operatively, apart from exertional dyspnoea (grade II), the patient was asymptomatic. On examination, she had grade II clubbing, pulse rate of 64 BPM, blood pressure of 140/90 mmHg, oxygen saturation of 96% on room air with no rise in jugular venous pressure. Lungs were clear on auscultation, cardiac examination revealed S1-S2 with wide fixed splitting of S2. ECG showed normal sinus rhythm. 2D ECHO and colour doppler suggested large ostium secundum - atrial septal defect (ASD) 26-28 mm, dilated right atrium, right ventricle & pulmonary artery, bidirectional shunt with a predominant left to right, severe tricuspid regurgitation with pulmonary arterial systolic pressure by tricuspid regurgitation jet 117 mmHg and good left ventricle diastolic function. Blood investigations showed Hb 13.7 g/dL, TC 8700/mm^3, platelets 2.5 lakhs, PT/INR 14.52/1.07, random blood sugar 202 mg/dl, urea 25 mmol/L, creatinine 0.9 mmol/L, sodium 132 mEq/L, potassium 4.2 mEq/L. Patient was seen by a cardiologist and given fitness under high risk for anaesthesia. Antiplatelet medications were stopped three days prior to the surgery and was started on low molecular weight heparin.

On the day of surgery, informed consent was taken by the patient and relatives for general anaesthesia. Invasive lines included, 18G peripheral line, 20G left radial line for arterial blood pressure monitoring and 7.5F, 16 cm catheter in the right internal jugular vein for central venous pressure (CVP) monitoring and drug administration. Because of ASD, special precautions were taken every time while injecting drugs to prevent air bubbles from entering the line. The other monitoring parameters included heart rate, rhythm, oxygen saturation, end tidal CO_2 and urine output. Anti-aspiration and infective endocarditis prophylaxis were given before induction. The patient was induced with injection midazolam 1 mg, injection etomidate 10 mg, injection fentanyl 100 mcg and injection atracurium 25 mg. Injection Xylocard was given prior to intubation to attenuate haemodynamic response while intubation. Anaesthesia was maintained with oxygen 60%, air, and sevoflurane. Volume control mode of ventilation was set to maintain end-tidal CO_2 at 30-35 mmHg. Titrated dose of injection nitroglycerine was administered intraoperatively to maintain blood pressure and urine output (0.5ml/kg/hr). The surgical duration was for 1 hour 30 minutes. At the end of the surgery, the patient was extubated after reversing skeletal muscle relaxation with injection neostigmine and glycopyrrolate. Postoperatively, the patient was shifted to an intensive care unit for monitoring. After an hour, the patient had hypotension and tachycardia with a decreased trend in CVP, which was suggestive of hypovolemia. The patient was stabilized with a colloid infusion. Postsurgical arterial blood gas (ABG) analysis showed pH 7.37, pCO_2 33.8 mmHg, pO_2 77 mmHg, HCO_3 19.2 mEq/L, BE 4.8. Patient was shifted to a ward the next day and was discharged two days later. On follow-up after 10 days, the patient was found to be haemodynamically stable.

Case 2

A 29-year-old female patient weighing 55 kg with congenital heart disease – large ventricular septal defect (VSD), severe pulmonary arterial hypertension, history of amenorrhoea of 3 months and intrauterine foetal death, presented to KD Hospital for dilatation & curettage (D&E). The patient was taking tablets sildenafil, torsemide, and ramipril; and was instructed to avoid strenuous work. On examination, the patient was asymptomatic with grade II dyspnoea, grade II clubbing, heart rate 64 BPM, BP 117/65 mmHg, SpO_2 84% on room air. ECG showed normal sinus rhythm and echocardiogram showed large VSD with a bidirectional shunt, ejection fraction of 56%, severe pulmonary arterial hypertension. Blood investigation showed Hb 12.3 g/dL, WBC count 11,310/L, and platelet count of 2,86,000/L. Ultrasonography showed intrauterine foetal death with Spalding sign positive. The patient was referred to a cardiologist and he suggested total intravenous anaesthesia (TIVA) for the procedure. A peripheral IV line of 20G was secured, aspiration was done and infective endocarditis prophylaxis was given with utmost care not to inject any air bubble. Monitoring included ECG, heart rate, non-invasive blood pressure, end-tidal CO_2 and oxygen saturation. The patient was put in a lithotomy position and started with 100% oxygen through Bain circuit. She was given injection ketamine 30 mg followed by injection fentanyl 100 mcg and injection propofol 100 mg in incremental doses. The procedure lasted for about 15 min and the patient was haemodynamically stable with spontaneous ventilation while maintaining the oxygen saturation of 97%. After the procedure, the patient was monitored in a postoperative unit for 3 hours and shifted to the ward. She was discharged after 24 hours in stable condition. On a telephonic follow-up, the patient was found to be stable.

Discussion

Eisenmenger syndrome is a cyanotic congenital heart disease. The first clinical description was mentioned in 1897 by the Viennese physician Victor Eisenmenger and in 1958, Paul Wood refined the pathophysiology of Eisenmenger syndrome as "Pulmonary hypertension due to a high pulmonary vascular resistance (PVR) with reversed or bidirectional shunt at aortopulmonary, ventricular or atrial level."[5,6]

Haemodynamically, Eisenmenger syndrome is defined as an elevation of the PVR to 12 Woods units or to a pulmonary-to-systemic resistance ratio (PVR:SVR) equal to or greater than 1.[7] Risk to develop Eisenmenger physiology depends on the size and location of the shunt lesion. It may occur in congenital anomalies with a left-to-right shunt big enough to allow equalization of pressure between both ventricles and/or pulmonary artery, and not in the patients with small shunts or septal defects associated with significant pulmonary stenosis.

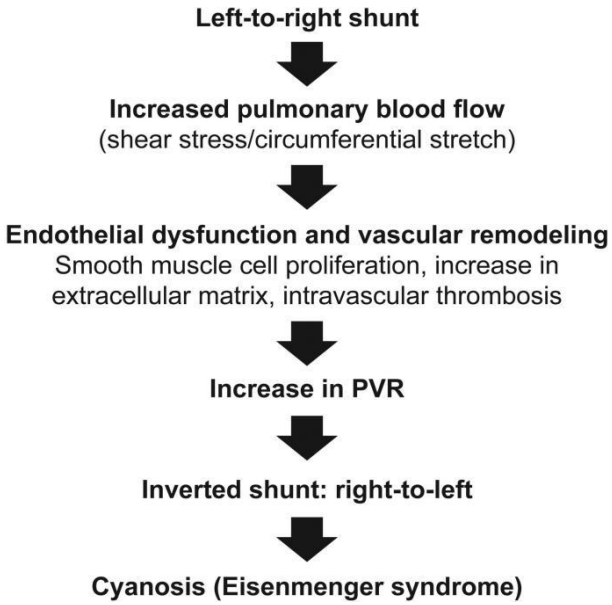

Fig 1: Pathophysiology of Eisenmenger syndrome

Though the patient in case-2 was a primigravida with 3 months of amenorrhea, the physiological changes of pregnancy are not evident enough to affect the pathophysiology of Eisenmenger syndrome. Hence, we planned our anaesthesia technique in advance for a non-pregnant patient with Eisenmenger syndrome coming for non-cardiac surgery.

Eisenmenger syndrome is one of the leading causes of perioperative death (up to 19%) in patients undergoing non-cardiac surgery.[4,8] Therefore, perioperative risk and outcome depends on the urgency, duration of surgery, anaesthesia used, and underlying pathology.

The goal of anaesthetic management is to maintain the baseline PVR:SVR ratio in order to prevent an increase in right-to-left shunt. Either regional or general anaesthesia may be used; however, each of them has its own risks and benefits.[9,10] Numerous studies have suggested that there is no anaesthetic technique that is superior to others in offering myocardial protection in Eisenmenger patients.[11] Both epidural and spinal anaesthesia causes sympathetic blockade and decreases both preload and afterload, which may be very hazardous in these patients. Also, when there is a decrease in SVR without a concomitant decrease in PVR, the amount of right-to-left shunt increases in Eisenmenger patients.[10,12]

During general anaesthesia, intermittent positive pressure ventilation causes a decrease in venous return and cardiac output and an increase in pulmonary artery pressure, which together produce an increase in right-to-left shunt.[9] However, general anaesthesia has been successfully used and is preferred in patients receiving antithrombotic drugs due to the increased risk of subdural haematoma following epidural or spinal anaesthesia.[13] General anaesthesia was given in Case-1 as the patient was on antiplatelet and anticoagulant, and sudden fall in the arterial pressure in neuraxial blockade was required to be avoided. Though the patient in Case-2 was not on any antiplatelet medication, the duration of surgery (D&E) prompted us to plan total intravenous anaesthesia (TIVA).

The goal of monitoring in anaesthesia is to detect sudden changes in the haemodynamics early to initiate appropriate treatment and prevent further complications. Invasive monitoring poses a specific risk in Eisenmenger patients as they are more prone to thrombus formation (due to polycythemia), have a higher risk for infection and paradoxical air embolus.[11] In Case-1, by considering risks and benefits, left radial line was obtained for continuous measurement of blood pressure and a central venous catheter was inserted in right internal jugular vein to detect right heart failure as the right heart was ejecting against high pulmonary vascular resistance and to optimize the preload. In Case-2, non-invasive monitoring was opted as the patient was young and was undergoing a short duration procedure where the scope for wide fluctuation in haemodynamics was minimal.

Patients with Eisenmenger syndrome pose a challenge to anaesthesiologists due to the inability to adapt to sudden changes in haemodynamics because their pulmonary vascular bed is fixed.[11] Most of the agents used for induction and maintenance of general anaesthesia depress myocardial function and reduce systemic vascular resistance. Many authors have also recommended concomitant administration of vasopressors to avoid hypotension during induction. Combination of injection fentanyl and injection etomidate was chosen as an induction agent in Case-1 because of their more haemodynamic stability in Eisenmenger patients.[14] No hypotension was observed with this combination. Intubation was felicitated by injection atracurium, a skeletal muscle relaxant with minimal effects on the cardiovascular system. Arm-brain circulation time is short in Eisenmenger patients due to the right-to-left shunt. In case-2, the patient was put in lithotomy position before administering the drug to cut down on anaesthesia time. Injection ketamine along with injection propofol and injection fentanyl was part of TIVA as it does not reduce SVR in Eisenmenger patients.[15] We avoided nitrous oxide in both the cases as it is a potent pulmonary vasoconstrictor.[9] Benedikt *et al* have concluded xenon as the choice of inhalation agent as it causes several physiological changes, which mediate protection of the brain and myocardium.[16] It has lowest blood/gas partition coefficient compared to all the inhalational agents. Also, sevoflurane shows suitable cardiovascular stability in one of the studies compared to others.[17] In Case-2, as the surgical duration was less and even minimal depressant effect of inhalation agent was to be avoided, TIVA was opted.

Intermittent positive pressure ventilation can increase the right-to-left shunt if excessive transpulmonary pressures are used. Hence, Lumley *et al* have recommended 5-8 litres per minute with a tidal volume of 5.5-6 ml/kg body weight to maintain $PaCO_2$ within normal limits in adults.[18] Though the patient in Case-2 was on spontaneous ventilation, there was no hypoxia or hypercarbia which are potent pulmonary vasoconstrictors.

Though the incidence of Eisenmenger syndrome has decreased over years due to early septal repairs, there is a proportionate increase in load of these patients as growing numbers of adult patients with CHD are surviving into adulthood and some into the sixth and seventh decade. Therefore, a good understanding of the pathophysiology of this syndrome is essential for anaesthetic management. The ultimate goal of any anaesthesia technique is to maintain the baseline PVR:SVR ratio and to avoid factors that increase PVR – like hypoxia, hypercarbia, metabolic acidosis, hypothermia, agitation, pain, tracheal suctioning.

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Dr Tejaswini Sheth
DA, DNB Anaesthsiology

Dr Hemaxi Ambani
MD, Anaesthsiology

Resection Of Paraganglioma Located Behind Inferior Vena Cava

Dr Shrenik Shah

Case Report

Abstract

The case represents a 63-year-old male with back pain as a symptomatic presentation of paraganglioma, which was diagnosed based on a metaiodobenzylguanidine (MIBG) scan of the abdominal region. This case of paraganglioma was special, provided the infrequent location of it being behind inferior vena cava. And it was treated with minimally invasive surgical excision with favourable prognosis.

Introduction

Paragangliomas, also known as extra-adrenal phaeochromocytomas, are rare occurring tumours. They are usually benign, catecholamine-secreting tumours that arise from chromaffin cells of the sympathetic ganglia.[1] Although most paragangliomas are located along the para-aortic sympathetic chains in the urinary bladder, thoracic cavity, or head and neck; they have also been found to develop in other regions of the body[2]. Its clinical presentation is so variable that paragangliomas have been described as "*the great masquerader.*" They may present with hypertension, headaches, and palpitations, but may also be silent and could be detected incidentally. Resection of paragangliomas can be difficult due to the complex anatomy and intensive intraoperative haemodynamic control. Correspondingly, meticulous surgical procedures are required for resection of these tumours. Besides, these surgeries are often associated with a high risk of injury to adjacent organs or blood vessels[3]. This particular case represents a paraganglioma located behind the inferior vena cava (IVC), which was detected incidentally.

Case

A 63-year-old normotensive male presented with back pain in the clinic. On evaluation, a mass was detected in the perirenal region on the ultrasound of the thorax-abdomen. Contrast-enhanced computed tomography (CECT) of the abdomen revealed a 66x44 mm, well-defined, lobulated, inhomogeneously enhancing lesion in the right suprarenal region but with fat planes maintained with the right adrenal gland [Fig. 1]. The mass was lying just behind IVC, however not infiltrating it.

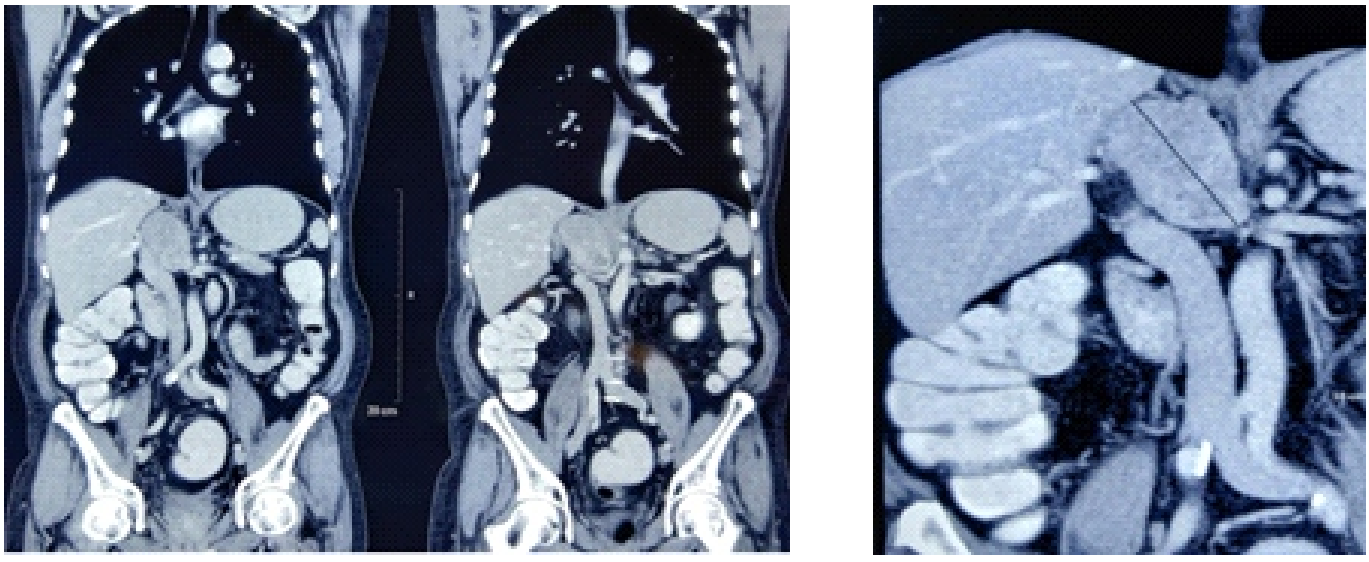


Figure 1: CECT abdomen and relation of the mass to IVC

Metaiodobenzylguanidine (MIBG) scan was performed, which showed abnormal tracer concentration areas in the abdominal area corresponding to right suprarenal location, suggestive of MIBG concentration tumour mass involving the right suprarenal region - most likely phaeochromocytoma [Fig. 2].

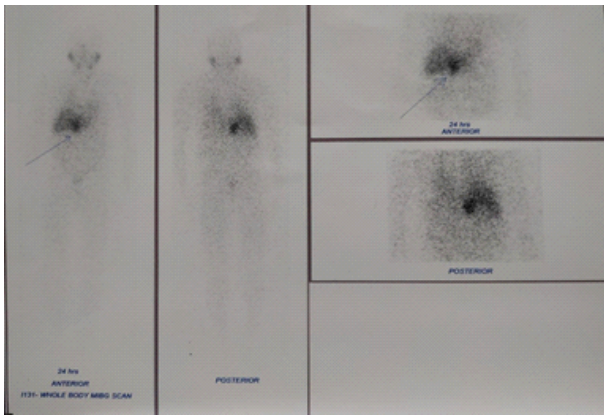


Figure 2: MIBG scan

The patient underwent laparoscopic right paraganglioma excision for this tumor [Fig. 3,4]. He recovered well and was discharged on the second postoperative day. Grossly, the tumour was 6x4 cm in size, 80 gm in weight, and the cut surface was solid, yellowish. There was a small tissue measuring 3x2 cm, whose cut surface was brownish and yellowish [Fig. 5]. Microscopic examination showed the morphology of phaeochromocytoma with detached adrenal cortical nodule [Fig. 6].

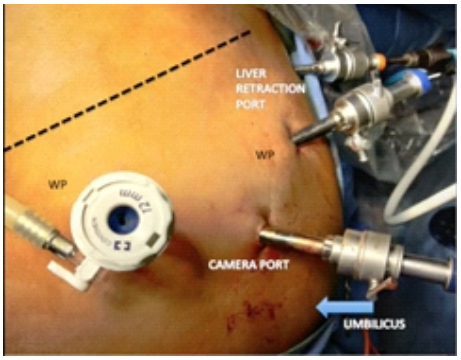


Figure 3: Intra-operative photo shows the port position of laparoscopic right paraganglioma excision

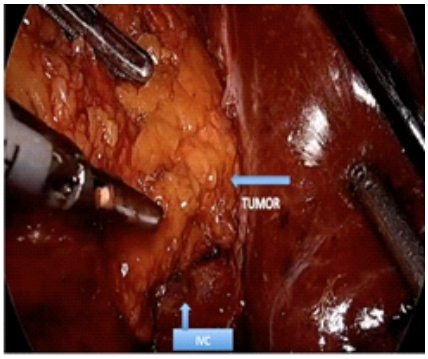


Figure 4: Intra operative photo showing relationship of tumour with IVC

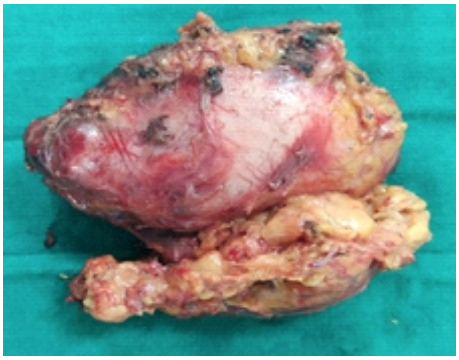
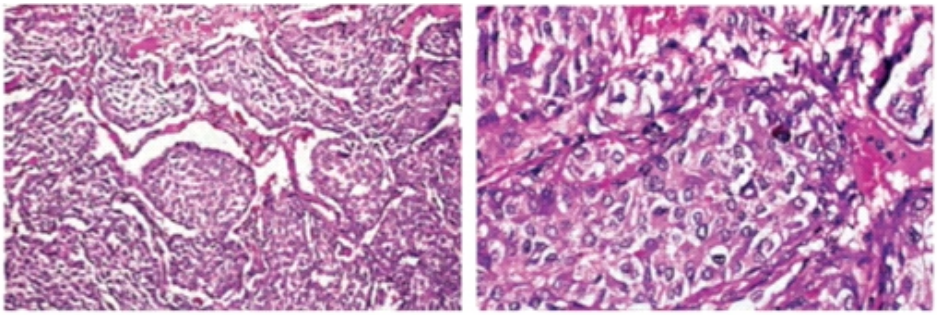


Figure 5: Specimen photo of right paraganglioma excision

Figure 6



HPE - characteristically arranged in well-defined nests ('Zellballen') bound by a delicate fibrovascular stroma,S/O Pheochromocytoma

Discussion

Paragangliomas can develop anywhere along the midline of the retroperitoneum. They are estimated to occur in about 2–8 of 1 million persons per year and about 0.1% of hypertensive patients harbouring paraganglioma.[4] Males are typically affected more frequently than females and most patients are diagnosed between the age of 30-45 years.[5] Clinically, patients with a retroperitoneal paraganglioma often present with back pain or a palpable mass.[6] Approximately 10% of cases have distant metastases detected at the time of diagnosis.[7]

Only a subset of paragangliomas is clinically functional and often exhibits signs and symptoms consistent with the active secretion of catecholamine, which include headaches, sweating, palpitation, and hypertension.[5] The current case represents a rare normotensive paraganglioma that developed in a relatively old patient having only abdominal pain as a clinical presentation.

Paragangliomas are tumours mainly diagnosed based on the measurement of plasma or urinary metanephrine. Computed tomography (CT) is the first-choice imaging modality, however magnetic resonance imaging (MRI) is recommended in the patients with metastatic paraganglioma. Functional imaging was performed with I123- or I131 MIBG scintigraphy.[8]

Surgical excision remains the treatment of choice for localized phaeochromocytoma. The operation and anaesthesia process were controllable, which may be related to the improvement of surgical techniques, diagnostic tools, and highly effective short-acting substances to control haemodynamics intraoperatively.[9]

Minimally invasive adrenalectomy is recommended for most of the adrenal paragangliomas and open resection for large or invasive paragangliomas to ensure complete resection and avoid local recurrence.[10] A multidisciplinary team approach with appropriate expertise is required to ensure favourable outcome for the treatment of patients with paraganglioma. In this case, a rare paraganglioma lying behind IVC was treated with surgical removal by minimally invasive surgery, which provided excellent outcomes with an uneventful postoperative course.

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Dr Shrenik Shah
MS General Surgery,
MCh Urology

Myocardial Infarction In Young

Dr Krunal Tamakuwala, Dr Abhishek Rajpopat, Dr Jayesh Rawal

Review Article

Introduction

Coronary heart disease (CHD) is a leading cause of death in young adults worldwide.[1] Myocardial infarction (MI) is a very grevious manifestation of CHD and can lead to sudden cardiac death.[2] Young adults aged <45 years represent a relatively small portion of the affected population that accounts for 3-10%.[3,4] The incidence is more in men, but an increasing prevalence is being observed among women.[5-7] There is a high incidence of normal coronary arteries, non-obstructive coronary arteries and single-vessel coronary artery disease in young MI.[8,9] Young MI have different risk factors such as smoking, family history of premature CHD and hyperlipidemia.[10,11] Overall, the young MI patients have a more favourable outcome and prognosis compared to older patients.[12]

Epidemiology

The term young varies from ≤40 to ≤55 years of age according to some literature where others have suggested 45 years as a cut off for young MI.[2,4,13] The incidence of CHD was found to be 0.5% in men and 0.18% in women in between 35 to 44 years of age, 20.5% in men and 17.1% in women between 45 to 60 years.[3,4] However, CHD in the younger population aged <45 years is 3-10% of all patients of CHD. Smoking which has been recognised as the most common risk factor of CHD.[8,9] Obesity is a growing concern among young adults and adolescents and has increased the threshold of CHD in the past few decades. Insulin resistance and metabolic syndrome were found in almost two-thirds of young people with MI. Cocaine use was also found to be the commonest factor amongst the youngest populati

Pathogenesis

MI among young adults (<45 years of age) can be divided into four groups:

a)Atheromatous coronary artery disease (Angiographically “abnormal” coronary arteries)

b)Non-atheromatous coronary artery disease (Angiographically “normal” coronary arteries)

c)Hyper-coagulable states

d)MI related substance misuse

a)Atheromatous Coronary Artery Disease (Angiographically “Abnormal” Coronary Arteries)

Angiographically abnormal-looking coronary arteries can have significant atherosclerotic plaque burden. The prevalence of advanced coronary atheroma in young adults is not well established. In necropsy study, 760 young victims died of various causes, advanced CHD was found in 20% of men and 8% of women between the ages 30 to 34 years.[2,4] Among young patients with the reported atheromatous process, cigarette smoking was found to be more common. In a study done in London among young patients with MI, positive family history of premature CHD was found in 39% of tthe patients.[9,10]

Mutations in the gene of low-density lipoprotein receptor produce familial hypercholesterolemia characterised by hypertriglyceridemia. Low HDL levels were commonly found in young MI patients. Various other lipid fractions like lipoprotein (a) and hyperhomocysteinaemia can lead to atherosclerosis and myocardial infarction. [14-15]

Spontaneous Dissections

Despite being a rare aetiology of MI, spontaneous dissections are more common in women during the peripartum and postpartum period. The left anterior descending artery (LAD) is most commonly involved in this, however, there may be multiple vessel involvement as shown in the other literature. The dissection plane lies between the media or between the adventitia, which is the major pathophysiology. Conservative management, angioplasty and stenting or bypass surgery are the possible treatment options.[16]

Aneurysms, Ectasia andAnomalous Origin of Coronary Arteries

Coronary aneurysms are congenital or acquired secondary to Kawasaki disease in childhood. Anomalous origin of left or right coronary arteries and its acute angulations and compression of the artery can be associated with MI in the young.[16,17]

b) Non-Atheromatous Coronary Artery Disease (Angiographically “Normal” Coronary Arteries)

The pathophysiology of angiographically normal coronary arteries is unclear but can be explained because of coronary artery embolisation, thrombosis and spasm. Coronary embolisation is rare but can be seen in patient with endocarditis of aortic valve. Coronary thrombosis can be seen in hypercoagulable states like protein C, protein S and factor XII deficiencies, antiphospolipid syndrome and in nephrotic syndrome.[18,19] Coronary artery spasm has also been reported in alcohol binges and amphetamine use.[20]

Coronary Embolisation

Left-sided infective endocarditis is common in intravenous drug abusers and can lead to MI. Endocarditis-embolisation is of 2 types:

1. Septic vegetations
2. Non-septic vegetations

Embolisation of septic vegetations arising from aortic and mitral valves causes MI in young. Embolisations of non-septic vegetations are seen in anti-phospholipid antibody syndrome and systemic lupus endocarditis. Paradoxical embolisation from right to left shunt leading to MI has also been reported.[21,22]

Myocardial Bridging

Sometimes coronary artery is embedded in subepicardial myocardium. During systole, this can impede blood flow resulting in myocardial ischaemia and infraction.[9,10]

c) Hypercoagulable States

1. Nephrotic Syndrome

Nephrotic syndrome is associated with hypercoagulability, dyslipidemia and decrease in coagulation factors like IX, XI and XII and is also associated with proteinuria. When the liver tries to compensate for the hypoalbuminic state, there is an increase in the synthesis of factors like II, VII, VIII, X, XIII and fibrinogen resulting in hypercoagulable state. Reduction in the levels of anti-thrombin III (a coagulation inhibitor) is particularly responsible for the thrombophilic tendency in most of the cases.[23,24] Protein C along with co-factor protein S is a vitamin K dependent coagulation inhibitor that acts on factors V and VIII. None of the above mentioned factors has been ruled out to cause thrombosis in nephrotic syndrome. Factor V Leiden mutation can result in a hypercoagulable state and can cause MI in young. Smokers and women on contraceptive pills are at higher risk to develop MI.[25]

2. Anti-Phospolipid Antibody Syndrome (Hughes' Syndrome)

Antiphospholipid antibodies are associated with autoimmune diseases like Systemic Lupus Erythematosus (SLE), but when they occur in isolation it is known as primary antiphospholipid syndrome. MI and valvular abnormalities of varying degree are associated with these syndromes. The mechanism of valve distortion is secondary to repeated thrombosis. Mild thrombocytopenia is a common finding of this syndrome. Arterial and venous thrombosis, antiphospholipid antibodies and miscarriages in pregnancy are prominent features of this syndrome.[26,27]

d) Substance Misuse and Coronary Spasm

Cocaine can cause coronary artery spasm associated with angina, myocardial infarction tachyarrhythmia and bradyarrhythmia, which may lead to sudden death. The cardiac effects of cocaine are as below:[23,24]

1. Coronary vasoconstriction caused by its alpha 1 adrenergic properties and calcium dependent direct vasoconstrictors
2. Increased oxygen demand due to a rise in systemic blood pressure and heart rate
3. Progression of atherosclerosis
4. Endothelial dysfunction which causes vasoconstriction and thrombosis.

Clinical Presentation of MI in Young

Rapidly progressive angina converted into full evolved MI is the main feature of young MI. A study showed that 69% of the patients with MI below the age of 45 denied any chest pain. Family history of premature CHD, risk factors like diabetes, hypertension, dyslipidemia, smoking and obesity will give clue towards atheromatous coronary artery diseases. A careful history of recurrent venous and arterial thrombosis should be taken.[25]

Clinical examination of sympathetic hyperactivity such as tachycardia, sweating and high systolic BP should be looked for. Any previous history of drug misuse should also be recorded. Clinical signs of dyslipidemia such as xanthelasma and tendon xanthomata should be documented. ECG of the patient should be checked for ST-segment elevation and dynamic ST-T changes. Abnormal Q waves are seen in the patients who present late (after 12 hours). ST depression and non-specific T wave inversions are seen in patients who have total occlusion of coronary arteries.[4,5]

Cardiac enzymes especially troponin-I is the sensitive marker for myocardial damage. In cocaine misuse, false rise in creatinine kinase (CPK-MB) can be seen.[23]

Management

Diagnostic Angiography should be performed in all cases present with MI.[2,4] Initial administration of oxygen, nitrates and aspirin should be considered for the first line of treatment. Benzodiazepines are

recommended, however beta-blockers are not recommended for the first 48 hours in patients of cocaine misuse due to unopposed alpha stimulation may result in severe coronary spasm and worsening of chest pain.[23]

1. Thrombolysis

In hypercoagulable state successful thrombolysis can provide a prompt resolution of the symptoms and decrease in ST-segment elevation.[26]

2. Revascularisation

Percutaneous transluminal coronary angioplasty (PTCA) with or without coronary artery stenting is successful in the antiphospholipid syndrome.[23] In patients with atherosclerosis, primary angioplasty has an improved outcome over thrombolysis. PTCA and stenting should be considered in coronary artery dissection.[27]

Coronary artery bypass grafting (CABG) should be offered to patients with triple vessel disease and complex coronary artery diseases. Arterial grafts are preferred over venous grafts because of long-term patency rates.[9,10]

3. Secondary Prevention

MI in young patients has better prognosis if properly treated. Antiplatelets like aspirin, clopidogrel, prasugrel and ticagrelor should be used as per the guidelines. Warfarin is necessary for patients with a hypercoagulable state and recurrent ischemic events.[28] Statins are used to stabilise plaques in atheromatous CHD. Other agents like niacin and omega-3 fatty acids are used for conditions like hypertriglyceridemia and low HDL. B-complex vitamins are useful in patients of hyperhomocysteinemia.[29,30]

Angiotensin-converting enzyme inhibitors (ACE I) should be considered in the patients with left ventricular dysfunction.[31]

Lifestyle modifications like smoking cessation play an important part in the management of MI in young.[2,4,5]

Conclusion

Substance misuse, premature CAD, hypercoagulable state and coronary artery anomalies have to be considered in all patients with suspected MI having less than 45 years of age. Early diagnosis, stabilisation, revascularisation and appropriate management are the keys to a better prognosis.

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Dr Krunal Tamakuwala
MD Medicine,
DM Cardiology

Dr Abhishek Rajpopat
MD Medicine,
DM Cardiology,
FISHD

Dr Jayesh Rawal
MD Medicine,
DM Cardiology,
FACC

Management of Nulliparous Prolapse

Dr Nita Thakre

Review Article

Abstract

In India, nulliparous prolapse cases constitute 1.5–2% of genital prolapse[1]; the incidence is even higher (5–8%) for young women who have just delivered one or two children making it one of the highest numbers in the world. The prevalence is very high in India because Indian women, especially those with poor socioeconomic status, are anaemic and malnourished with poorly developed pelvic floor tissues and the additional insult of one or more vaginal deliveries at home is sure to bring down the cervix and uterus.

Causes

- Congenital defects of pelvic floor muscles like bladder exstrophy [1,2]
- Collagen defects (Type IV Ehlers-Danlos syndrome, Marfan syndrome) [1,3]
- Congenital spine defect - spina bifida occulta [1,3]

In the evolution of conservative operations for prolapse, many sling operations were described in India that soon became very popular because of their simplicity and effectiveness.

Initially, body tissues like fascia lata and rectus sheath were used but later given up. The native fascia was replaced by synthetic slings that produce minimal tissue reaction and remain unabsorbed giving lifelong support.

There has been a paradigm shift in the type of material used to create new support for the prolapsed uterus. Traditional operations like Fothergill's use native fascia for repair, the same endopelvic fascia [4] that was the cause of the prolapse: this falls over time resulting in recurrence, whereas modern sling operations use a prosthetic material like Mersilene which gives lifelong support. This is also the reason why the rectus sheath used in original cervicopexy was replaced by prosthetic tape. Thus, in modern gynaecology, native fascia has been abandoned in favour of prosthetic inert materials.

Since India has the largest prevalence of nulliparous prolapse, it is no surprise that Indian gynaecologists have devised most of the conservative operations for genital prolapse. The various conservative sling operations for genital prolapse in young women who want to preserve fertility are:[4]

- Shirodkar Sling: 1958
- Purandare Cervicopexy: 1965
- Khanna Sling: 1972
- Soonawalla Sling:
- Joshi Sling: 1993
- Virkud Sling: 1999

Selection Criteria for Sling Operations[4]

In order to decide which patient is suitable for a sling operation, certain selection criteria must be followed.

- Young women with second or third-degree uterocervical prolapse
- Uterocervical length of less than five inches
- Absent or minimal cysto/rectocele
- If moderate to large cysto/rectocele is present, it should be repaired from below at the same sitting before performing the sling

Not suitable for hypertrophied, lacerated and infected cervix

Aims of Conservative Surgery [1]

- To relieve the symptoms
- To restore the anatomy to normal
- To restore the function to normal
- To prevent the recurrence in future
- To maintain child-bearing potential
- To maintain menstrual function
- The surgery must not hamper the course of normal labour and delivery

Operations for Nulliparous Prolapse [1-3]

- Sling - Abdominal/laparoscopic
- Transvaginal sacrospinous fixation

Abdominal Sling Operations are Indicated When [1-3]

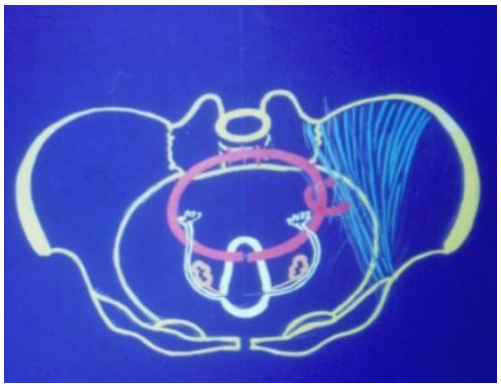
- The ligaments are extremely weak
- When we want to preserve reproductive function

With a special strip or prosthetic inert material, the cervix is fixed to the abdominal wall/sacrum/pelvis. Cystocele/rectocele repair, if needed, can be done vaginally before/after. Enterocele repair can also be done abdominally.

Types

- Shirodkar's Posterior Sling
- Purandare's Anterior Cervicopexy
- Khanna's Sling
- Virkud's Composite Sling
- Joshi's Sling
- Sacrocervicopexy

Shirodkar's Sling



- Tape is fixed to the posterior aspect of isthmus & sacral promontory
- Anatomically correct but difficult to perform.
- Dr. V.N. Shirodkar used fascia lata femoris to strengthen the uterosacral ligaments [4] and fixation to the sacral promontory retroperitoneally, now replaced by Mersilene tape.
- It has a definite advantage over fascia lata as it is an inert material, non-absorbable, non-irritant with predictable tensile strength.

Purandare's Cervicopexy

- Fascial strips are anchored to the anterior aspect of isthmu
- Advantages -
  Easy to perform
  Dynamic support
  Minimum blood loss
- Disadvantages-
  Alters pelvic anatomy by obliterating U-V fold
  Vagina is being pulled forward, so increased chances of enterocele formation
- The modified version is simple, effective and technically less demanding

Khanna's Sling Operation

- Tape is anchored to an anterior aspect of isthmus & anterior superior iliac spine
- Easier to perform and safer

Soonwala's Sling

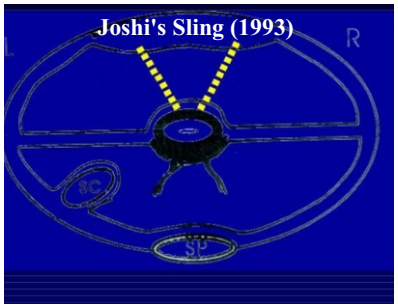
- Anterior longitudinal ligament on S1 vertebra along the right uterosacral ligament of the isthmus of uterus retraced extra-peritoneally to S1 vertebra.

Joshi's Sling (1993)

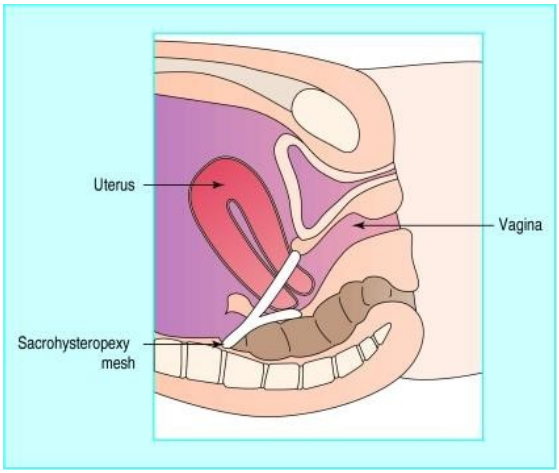
- Anterior surface of the uterus at the level of the internal os is suspended to the pectineal ligament on both sides with Mersilene tape.

Virkud's Composite Sling Operation

- Tape is anchored from the posterior aspect of the isthmus to sacral promontory on the right side & anterior abdominal wall on the left side.
- Uterosacral ligament is plicated to correct dextrorotation of uterus



Laparoscopic Cervicopexy/Sling Operations



- All types of sling operations can be better performed by laparoscopy.
- Associated vaginal prolapse can also be repaired laparoscopically (paravaginal repair).
- Vaginal anterior/posterior colporrhaphy can be done before/after laparoscopy.
- The advantages of this approach include - small incision, better view, no packing, minimal tissue & bowel handling, short recovery, less pain, insignificant scar.
- Expertise is required to perform this operation.

Complications

- Postoperative: Bleeding, infection, DVT, voiding, pain/nerve injury, graft complications
- Identify etiology at the time of surgery - lowest morbidity if dealt with at that time
- Mesh repairs have introduced a number of new potential complications
- Key is identifying problems and knowing how to deal with them.

Conclusion

Management of nulliparous prolapse does put a major challenge in preserving uterus, bearing future pregnancy, and giving birth to a child. Many procedures exist for treatment of nulliparous prolapse each with variable complications, technical difficulties, effectiveness and costs.

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Dr Nita Thakre
MD Obstetrics & Gynaecology

MICROSPORIDIAL KERATITIS - A REVIEW

Dr Anuja Desai, Dr Krunal Patel, Dr Rinal Patel

Review Article

Abstract

In both immunocompromised and immunocompetent individuals, microsporidia are known to be the cause of ocular, gastrointestinal, renal, pulmonary, sinus, and muscular diseases. Ocular forms have a different presentation in immunocompetent and immunosuppressed patients. One needs to keep in mind the various risk factors and sources of infection to have a high index of suspicion for its prompt diagnosis and treatment.

Introduction

Microsporidia have been recognized almost 100 years ago as small, eukaryotic, spore-forming, obligate intracellular parasites. The first case of corneal microsporidiosis published by Ashton in 1973 [1]. In India, the first case of ocular microsporidiosis was reported in 2003, in an immunocompetent individual [8].

Ocular microsporidiosis may occur in isolation or as a part of a systemic infection. While both immunocompromised and immunocompetent individuals are affected, in recent years, more cases are being reported in immunocompetent people. The two major forms of ocular type are [2,6]:

- Superficial Punctate Epithelial Keratoconjunctivitis, mostly seen in immunocompromised individuals or contact lens wearers but also reported in healthy individuals
- Deep Stromal Keratitis, seen in immunocompetent individuals

Epidemiology, Risk Factors, Sources of Infection

Microsporidia have been recognized almost 100 years ago as small, eukaryotic, spore-forming, obligate intracellular parasites. The first case of corneal microsporidiosis published by Ashton in 1973 [1]. In India, the first case of ocular microsporidiosis was reported in 2003, in an immunocompetent individual [8].

Microsporidia are unicellular parasites that may rarely cause ocular infections, most often following ocular trauma or exposure to contaminated water. [12] Microsporidia are ubiquitous in nature and parasitize both invertebrates and vertebrates. Depending on the region, demographic characteristics of the population, and method of diagnosis, the worldwide prevalence of microsporidiosis in humans rates between 0% and 50% and is significantly increasing in immunocompetent people [2,6]. Recent studies indicate a high prevalence of microsporidial keratoconjunctivitis in the rainy season, especially in India and other countries with similar climates [6,7].

Several predisposing factors for microsporidial keratitis in immunocompetent individuals have been reviewed. Poor sanitary conditions and exposure to animals, soil/mud or dirty water is an important risk factor. Drinking water can act as a reservoir for microsporidia since chlorination does not inactivate spores. Other risk factors are trauma, dust particles, contact lens, insect bites, bathing in unclean river waters, and LASIK surgery. Exposure to hot springs has also been reported as a risk factor. Topical steroid therapy can cause localized immunosuppression and thus act as a risk factor. Microsporidial keratoconjunctivitis transmitted by the donor corneal graft has also been reported [5,6].

Microsporidia are waterborne pathogens. The source of infection is thought to be either orofaecal, resulting from direct inoculation, or occurring after trauma. Direct inoculation may occur with close contacts representing spread from other infected persons or following contact with domestic animals such as cats and birds [2,3,7].

Clinical Presentation

The clinical findings of microsporidial keratitis include bilateral/unilateral photophobia, light sensitivity for several months, blurred vision, foreign body sensation, lid oedema, red-eye, bilateral blepharoptosis, tearing, congested conjunctiva, and corneal lesions in the form of mid to deep stromal infiltrates surrounded by oedema with either intact epithelium and/or epithelial defect over the stromal lesions. The endothelium does not show precipitates [2,6].

Diferential Diagnosis

Infectious keratitis, Thygeson's superficial punctate keratitis, Acanthamoeba keratitis, mycobacterial keratitis, adenoviral keratoconjunctivitis; fungal, bacterial, or HSV stromal keratitis [12]

Diagnosis

Diagnosis with conventional methods is still challenging. Biomicroscopic examination shows diffuse, coarse, white infiltrates and erosion of the corneal epithelium [6]. Microbiologically, acid-fast organisms are morphologically demonstrated in the scrapings or tissues using light microscopy and electron microscope (EM) studies for definitive diagnosis and species differentiation. Immunofluorescent staining techniques are

advanced tools which need specific antibodies only available in specific research laboratories [2]. Development of PCR-based detection methods has greatly enhanced the sensitivity and specificity for identifying microsporidial DNA in corneal scrapings in adjunct with smear examination [4].

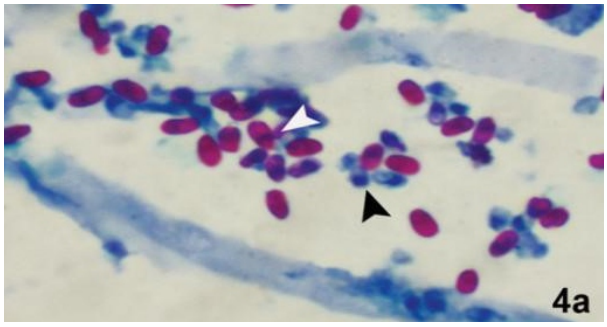

Figure A: Microsporidal spores are seen as well defined oval reddish bodies with a dark staining of the narrow end of the spore (black) or a waistband (white) closer to the tip of narrow end. Also seen are the unstained blue spores which possibly are immature or degenerating spores (1% acid fast stain, × 1000).

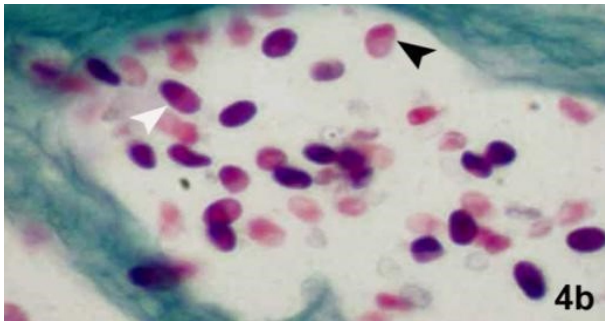

Figure B: The spores are well delineated as purplish pink egg-shaped spores with a darker staining of the tip (white arrow). Even the degenerating spores show the darkly staining tip (black arrow) Gram's chromotrope stain (× 1000) [9]

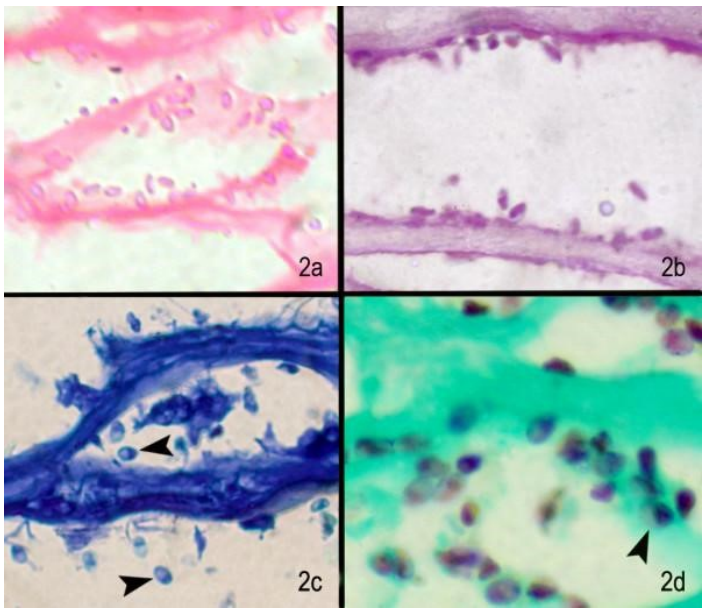

Figure 2A: Under higher magnification, the microsporidal spores are seen as pink oval structures (H & E stain, × 1000);

Figure 2B: Magenta pink oval structures in PAS stain (× 500)

Figure 2C: Deep blue oval structures with dark tip (arrow) in some spores Giemsa stain (× 500)

Figure 2D: Well defined brown oval spores with a dark tip or band in Gomoris methenamine silver stain (× 500) [9]

Treatment

Subjective improvement can be achieved with debulking and a combination of topical antimicrobial agents (trimethoprim sulphate, neomycin, polymyxin B and bacitracin antibiotics) followed by complete resolution with oral itraconazole. Treatment with topical propamidine isethionate 0.1% (Brolene) or systemic itraconazole is also effective against microsporidial superficial keratoconjunctivitis. Use of topical fumagillin with/without oral albendazole has also been successful [2,6].

Surgical treatment is usually not required; however, the beneficial effects of epithelial debridement have been reported. Debridement decreases a load of organisms in the corneal epithelium [6]. Therapeutic penetrating keratoplasty (PKP) is indicated in cases where medical treatment fails. Topical fumagillin can be used postoperatively with no significant adverse side effects [10].

Our Experience

Case 1

A 29-year-old female presented with complaints of irritation and foreign body sensation in the left eye for 1 day. She had a history of washing her eye with tap water 3 days prior to coming to the hospital. No other significant history was elucidated. On examination, her best-corrected visual acuity was 20/40 in the left eye and 20/20 in the right eye. Slit-lamp examination revealed greyish white elevated lesions on the cornea (Figure 1) with the rest of the anterior segment within normal limits. Fluorescein stain showed false negative staining with classic stuck on bread crumb appearance (Figure 2). The patient was started on topical ciprofloxacin eye-drops 6 times a day, topical fluorometholone eye-drops 4 times daily and topical carboxymethylcellulose eye-drops 8 times per day. The lesions subsided within a week and the vision improved up to 20/20 in the next consecutive days.

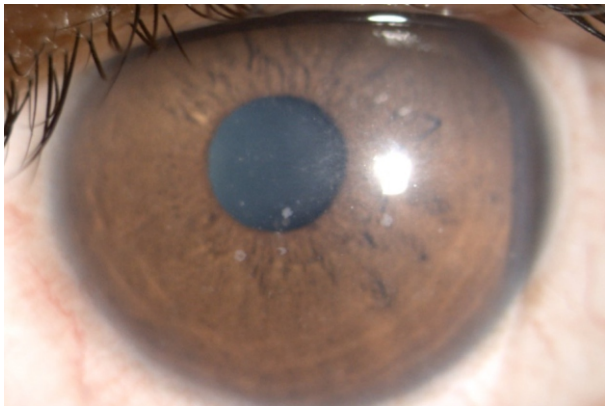

Figure 1: Greyish White Elevated Lesion

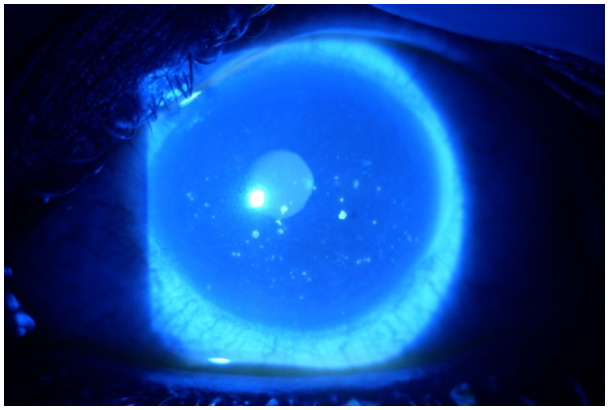

Figure 2: Fluorescein stain showing classic bread crumb appearance

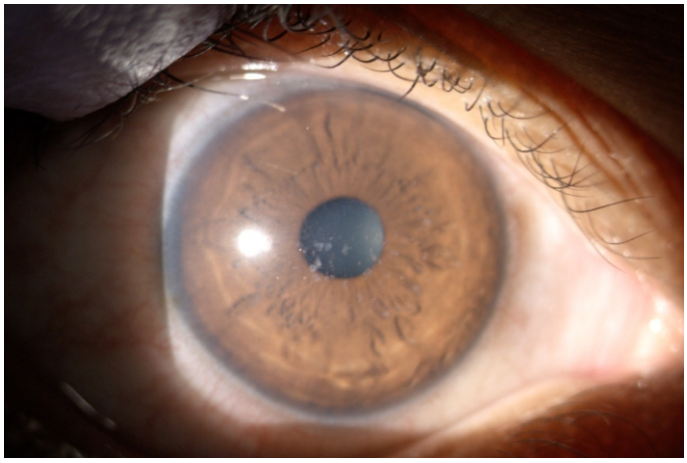

Figure 3: Multiple Raised Punctat Intraepithelial Lesions

Case 2

A 24-year-old female with a history of blurring of vision, redness and foreign body sensation in the right eye for 2 days. The patient had the past history of undergoing laser vision correction in bilateral eyes 8 months back. She denied a history of trauma or similar other episodes in the past. On examination, her best-corrected visual acuity was 20/40 in the right eye and 20/20 in the left eye. Slit-lamp examination showed multiple raised punctate intraepithelial lesions (Figure 3) that were highlighted after fluorescein staining (Figure 4). Rest of the anterior segment was within normal limits. The patient was started on topical ciprofloxacin eye-drops 6 times a day and topical carboxymethylcellulose eye-drops 10 times a day. At 10th day follow-up, the lesions had subsided (Figure 5) and the vision improved to 20/20.

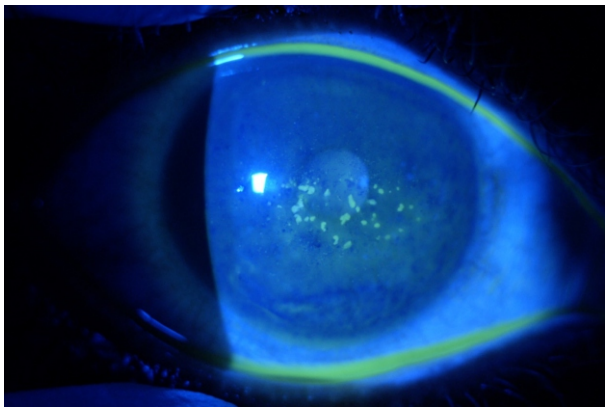

Figure 4: Fluorescein Stain

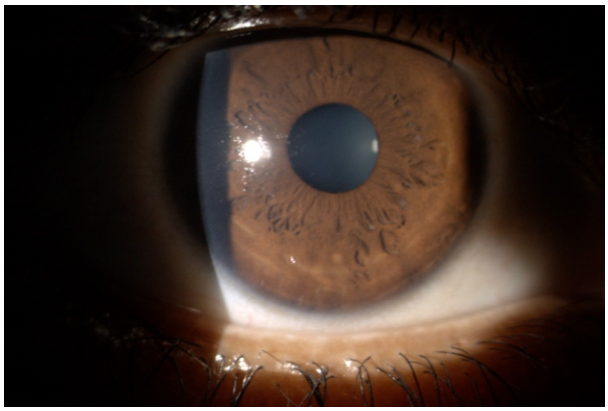

Figure 5: Clear Cornea after 10 days of treatment

Conclusion

Microsporidia are a rare cause of corneal infections that most often present as acute superficial keratoconjunctivitis secondary to Vittaforma corneae or slow-growing, recalcitrant stromal keratitis secondary to Encephalitozoon species. [12] A multifocal, coarse, punctate unilateral keratitis associated with mild conjunctivitis appears to be the characteristic manifestation of this disease. [11] Though ocular microscopy and tissue staining remain the most common tools for the detection of Microsporidia, molecular and non-invasive techniques may play an expanding role in the diagnosis. [12]

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Dr Anuja Desai
MS Ophthalmology,
FMRF

Dr Krunal Patel
MS Ophthalmology

Dr Rinal Patel
DOMS Ophthalmology

A Short Clinical Review: Air Pollution And Neurological Disorders

Dr. Ruchir Divatia

Review Article

Abstract

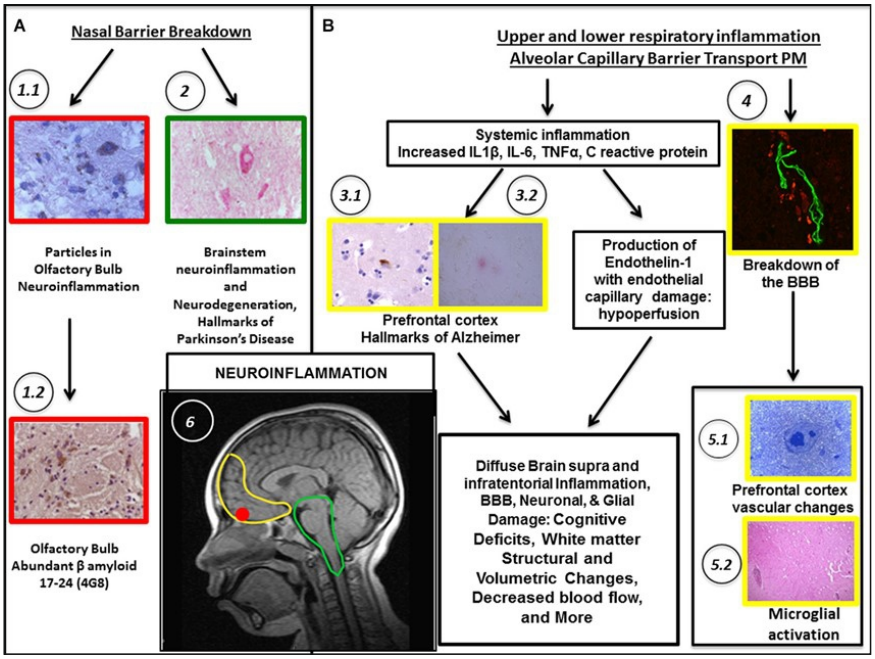
Recently, air contamination has likewise been related with sicknesses of the central nervous system (CNS); including stroke, Alzheimer's illness, Parkinson's infection, and neurodevelopmental diseases. Additionally, respiratory and cardiovascular system inflammation arising from the air pollution influence CNS wellbeing.

Introduction

The adverse effects of air pollution on respiratory and cardiovascular health are firmly established but its impact on neurological disorders is only recently described.[1] Exposure to ambient air pollution increases mortality and morbidity and shortens life expectancy. "Global Burden Of Disease 2015"[2] identified air pollution as a leading cause of global disease burden, especially in underdeveloped and developing countries. The importance of studying air pollution as a major risk factor for neurological disorders lies in the fact that ambient and household air pollution have caused around 6.4 million deaths worldwide and cerebrovascular disease ranks second in association with a chronic obstructive pulmonary disease as a cause of death based on age-standardised death rate per 100,000 people. Southern Asia has the highest age-standardised rates of death due to PM2.5 exposure (133.4 per 100,000 population). According to the same landmark study, air pollution levels in India is required to be reduced by 20% to maintain per person mortality at 2010 levels.[2] The purpose of this review is to study the current knowledge of the impact of air pollution on various neurological disorders.

Particulate Matter in Air Pollution

Air pollution is a complex mixture of gases and particles whose sources vary spatially and temporally. Particulate matter in the air is defined by aerodynamic diameter (>2.5 to <10-µm coarse particles, PM10, <2.5-µm fine particles, PM2.5 and <100-nm ultrafine particulate matter or UFPM). The major sources of PM2.5 and UFPM in the environment are from the combustion of gas, oil, coal, industry and fires, metals and biological materials. The smaller the particle, the larger the surface area, the better lung penetration and diffusion and direct translocation into the brain.[3] PM2.5 is the component most consistently implicated in neurological disease.[4]



Biological pathways associating PM exposure with the breakdown of nasal and olfactory pathways (A) and upper/lower respiratory tract inflammation along the passage of PM through the alveolar-capillary barrier (B) are shown.[3]

Impact of Polluted Air on Developing Brain

Chronic exposure to particulate matter in polluted air results in an inflammatory process involving the respiratory tract, which in turn causes a systemic and neurological immune response. The fine and ultrafine particulate matter could serve as a crucial trigger for a chain of events leading to endothelial activation and disruption of the blood-brain barrier (BBB) resulting in a neuroinflammatory response.[4] Exposed urban children develop cerebrospinal fluid (CSF) antibodies to several neural proteins like myelin basic protein. Inflammatory mediators like cyclooxygenase and interleukin-1B are upregulated in the olfactory bulb and frontal cortex of these children.[4] Further, children also exhibit astrocytic build-up of B-amyloid peptide in the frontal cortex. Accumulation of alpha-synuclein is also seen in brainstem nuclei like auditory and vestibular nuclei. This can be demonstrated electrophysiologically by delayed brainstem auditory evoked potentials.[3] Recent studies have also reported associations between prenatal and perinatal exposures to air pollutant and Autism spectrum disorder in children.[4] Collectively, these early changes could be the precursor of neurodegeneration seen later in life.

Air Pollution and Cognitive Dysfunction

Residence in proximity to a major roadway greater than 20 years among old individuals (68-79 years) has been associated with an increased incidence of mild cognitive impairment.[5] As described earlier, air pollution could be linked to the pathogenesis of neurodegenerative diseases like Alzheimer's and Parkinson's disease. However, this risk is further aggravated by environmental conditions like living in densely populated areas, poor socioeconomic status and genetic factors like APOE4 allele.[4] The factors influencing the effect of O3 include gender, body mass index, and presence of APOE4 allele. Interestingly, these air pollutants cause cognitive dysfunction not only by neurodegeneration but also cause white matter injury even in children.[3]

Air pollution and Stroke

A study on cause-specific premature death by ambient PM2.5 exposure in India by IIT, Delhi showed that around 44,500 premature deaths can be prevented if India achieves its present air quality target of 40 µgm. According to this study, stroke is the third leading cause amongst the premature deaths attributed to ambient PM2.5 exposure.[6] This highlights the specific need to reduce pollution for the reduction in stroke incidence. Short term exposure to carbon monoxide, sulphur dioxide, and nitrogen dioxide in addition to PM2.5 and PM10 and a weaker association with Ozone were noted in a recent meta-analysis. The strongest association was with the days of exposure and more persistent effects seen with PM2.5.[7] Among the chemical components of PM2.5 organic carbon, sulphate, nitrate, and ammonium are significantly associated with stroke mortality. Dust storms containing PM10, seen frequently in Asian countries, also increase the stroke risk.[4] Ambient temperature may influence air pollution and hospital admissions for stroke. PM2.5 increases the relative risk of hospital admissions caused by ischaemic stroke by 11% on warm days (>23°C) and by 4% on cold days (<23°C) in Taiwan whereas increased NO2 exposure is positively associated with stroke admissions during the cold season in China.[4]

Studies have shown that stroke due to air pollution could be due to carotid artery disease or even cardioembolism.[8] As with cognitive dysfunction, residence in proximity to a major roadway is associated with increased carotid intima-media thickness, too. PM2.5 is an independent risk factor for carotid artery stiffness. Among the elderly, PM2.5 increases resting cerebrovascular resistance and decreases cerebral blood flow.[4]

Air pollution and Parkinson's Disease

Parkinson's disease is a neurodegenerative disease of unknown aetiology, thought to be caused by a complex interaction of environmental and/or genetic factors. Air pollution could be one of the environmental factors which have been studied extensively in the recent past. The hypothesis behind this is based on neuroinflammation in response to several inhaled pollutants. Microglia are activated by these pollutants and in turn, become a source of inflammatory mediators like cytokines and reactive oxygen species.[9] However, a large prospective population-based study involving U.S men failed to show any evidence that air pollution is a risk factor for Parkinson's Disease.[10] A recent meta-analysis of 13 different studies found only a weak association between different air pollutants (mostly originating from traffic) and Parkinson's Disease.[11]

Conclusion

Air pollution has become one the leading factors contributing to several neurological disorders including stroke, carotid artery disease, cognitive dysfunction and possibly Parkinson's disease. The global burden of disease study estimates that PM2.5 caused 7.6% total global mortality in 2015. Although global rates of mortality due to PM2.5 exposure decreased from 1990 to 2015 in high-income countries the absolute numbers of attributable deaths and disability increased as a result of increases in pollution especially in China and India.[2] This is going to be one of the major public health issues in future and possibly one of the important modifiable risk factors for cerebrovascular and neurodegenerative diseases. Interestingly, the toxicity of ambient PM2.5 depends only on the magnitude of concentration but not on the source like coal-burning or vehicular emissions.[2] Thus, any strategy to reduce PM2.5 one of the most important of the air pollutants has to focus on concentration and not the only source. Another strategy could be to screen children and adults having APOE4 allele who are more vulnerable to the effects of air pollution. However, this is going to be an active area of research in future.

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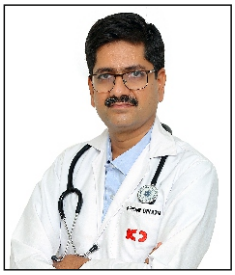

Dr Ruchir Divatia
MD Medicine,
DM Neurology

Role Of Bipolar TURP In High-Risk Patients

Dr Shrenik Shah

Review Article

Abstract

Benign prostatic hyperplasia (BPH) is a highly prevalent disease afflicting mankind. BPH is the major aetiology of lower urinary tract symptoms (LUTS) in men >50 years of age. It occurs due to the enlargement of the prostate, an organ surrounding the urethra which is a part of a male reproductive system. Many such patients will have comorbidities pertaining to old age.

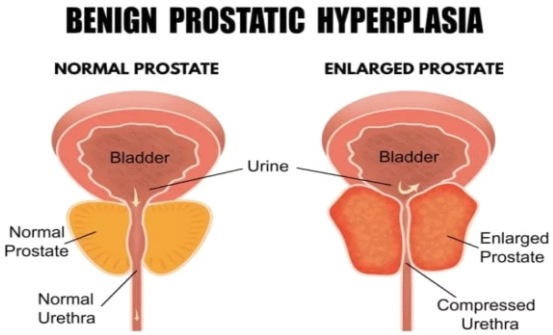

Figure 1: Normal prostate surrounding urethra at the base of the bladder; incomplete bladder emptying due to compression of urethra by an enlarged prostate

Evaluation

A patient older than 50 years with LUTS should get a basic minimum of physical examination in form of the digital rectal exam (DRE), fill an International Prostate Symptom Score (IPSS) form, get a urinalysis, serum prostate specific antigen (S.PSA), uroflowmetry, and ultrasonography kidney, ureter, bladder (USG KUB).[1] These simple steps will often help to reach a diagnosis of BPH.

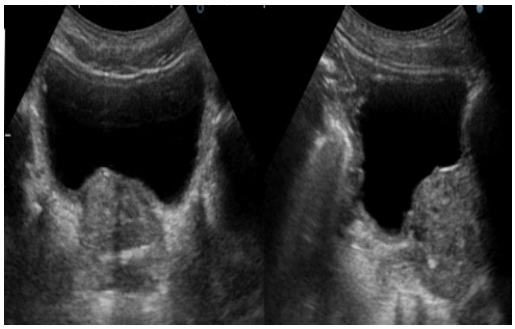

Figure 2: Transabdominal ultrasound examination of the prostate showing enlarged prostate with median lobe projecting into the bladder

Management

Pharmacologic treatment should be routinely discussed with patients who have mild to moderate symptoms (IPSS ≥8), irritating symptoms, or both, especially in high- risk patients who may choose conservative management.

Surgical therapy, aiming at relieving the obstruction, is indicated after the failure of maximal drug therapy or with complications of the disease.[2]

Bipolar TURP

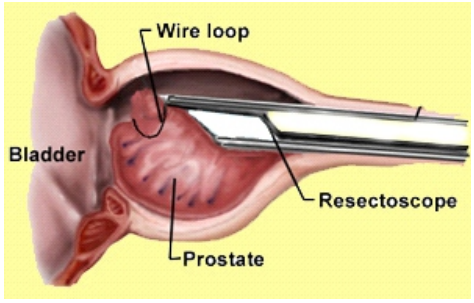

Figure 3: Standard TURP

Since its introduction in the 1930s, transurethral resection of the prostate (TURP) has been the gold standard.

Bipolar TURP has long remained a gold standard in the management of BPH. It has gained much popularity and has become available worldwide.[3] Its feasibility in high- risk patients is well documented with low adverse effect profile and good outcomes.[4]

Advantages

The procedure improved haemostasis, better intraoperative visualization, and the use of saline as an irrigant, which reduces the risk for TUR syndrome. Some studies also propose a reduced hospital stay and shorter catheterization time. A shorter duration of hospital stay and a faster post-operative recovery could also reduce the financial burden.[4,5] Patients are discharged as early as on post-operative day1. These advantages make Bipolar TURP an adequate procedure in high-risk patients.

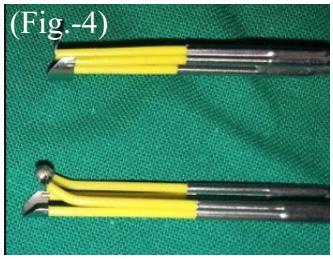

Figure 4: Bipolar TURP cutting loop used in the surgery to resect the prostate

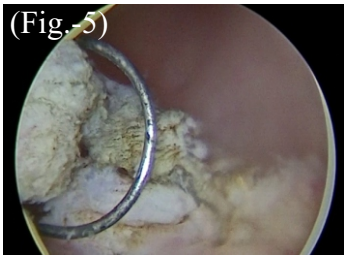

Figure 5: Intraoperative view during bipolar TURP

Our Experience

We perform more than 150 TURPs per year with both monopolar and bipolar systems. However, we strongly recommend Bipolar TURP as the surgery of choice, following the latest guidelines for high-risk elderly patients after adequate stabilization of comorbidity, careful surgery and good perioperative monitoring. We have been successful in providing effective treatment using this technique in such patients with minimal morbidity.

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Dr Shrenik Shah
MS General Surgery,
MCh Urology

Terson's Syndrome: Photos of Disease and Treatment Via ND:YAG Hyaloidotomy Laser

Dr. Ruchi Vala, Dr. Anuja Desai, Dr. Sandeep Modh

Photoassay

Abstract

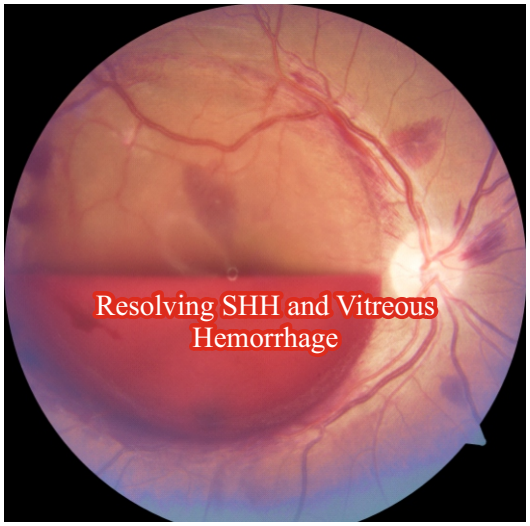
Terson syndrome or Terson's syndrome is an incident of vitreous haemorrhage associated with subarachnoid haemorrhage in human eyes. Vitreous haemorrhage of the eye may also take place along with intracranial haemorrhage and elevated intracranial pressure (ICP).

Case

A 40-year-old male patient was referred to the Department of Ophthalmology with the complaint of sudden painless diminution of vision in the right eye of 48 hours of duration. The patient was admitted (Postoperative Day-2) to the Department of Neurosurgery for coil embolization of Left Posterior Communicating Artery (PCOM) aneurysm. Patient also had subarachnoid haemorrhage (SAH) in the basal region, interhemispheric fissure and bilateral temporoparietal region.

On ocular examination, visual acuity (BCVA) in the right eye was counting finger close to face (CFCF) and left eye 6/6 with normal intraocular pressure. The patient had a normal anterior segment examination. Fundus examination revealed a large premacular subhyaloid haemorrhage (Photo A, D) along with intraretinal haemorrhages in the mid periphery in all quadrants in the right eye whereas the left eye examination was normal.

The patient was diagnosed with Right Eye Terson's Syndrome and was advised Nd:YAG Hyaloidotomy Laser. Immediately following the laser, there was a break in the posterior hyaloid membrane and drainage of blood in the vitreous cavity (Photo B). At one week follow-up after the laser hyaloidotomy, the patient had BCVA 6/12 in the right eye and there was a resolving subhyaloid haemorrhage and vitreous haemorrhage (Photo C, E).



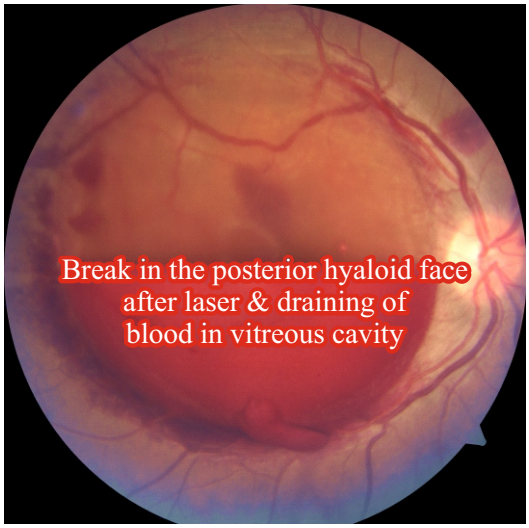


Image A: At Presentation

Image B: ND: YAG Hyaloidotomy laser

Image C: One Week Post Operative Laser Treatment

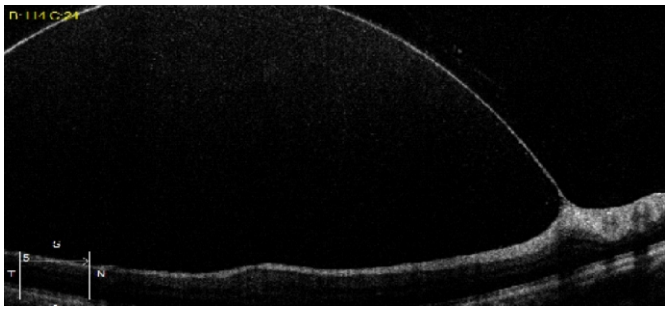


Image D: SHH At Presentation

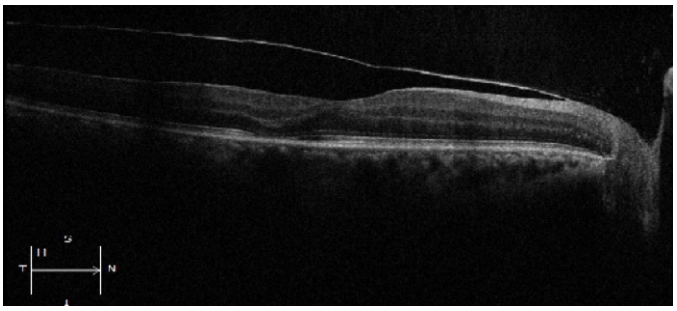


Image E: Resolving SHH

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Dr Ruchi Vala
MS Ophthalmology
FVRS

Dr Anuja Desai
MS Ophthalmology,
FMRF

Dr Sandip Modh
MS Surgery,
MCh Neurosurgery,
Neurointervention
Fellowship

11-year-old gets new 'face' at city hospital

Times News Network

Ahmedabad: Mayank (name changed), 11, a resident of a village near Palanpur in Banaskantha district, posed a medical challenge for doctors at KD Hospital in Ahmedabad, when he was brought in on May 29. The victim of a road accident, Mayank had deep lacerations on his face and chest that had exposed the interiors of his eye, nose, mouth, neck and chest.

"He was not only put on a ventilator, but also given CPR. He was fed through a tube for nearly a fortnight as a team of experts – ranging from a paediatric intensivist to a plastic surgeon and a neurosurgeon – were put on the case," said a senior official at KD Hospital.

The team consisted of neurosurgeons Dr Sandip Modh, Dr Gopal Shah, ER consultant Dr Vivek Ambalia, plastic surgeon Dr Rutvij Parikh, oculo-plastic surgeon Dr Sapan, and neonatologist Dr Snehal Patel. It worked on the case and decided on suturing instead of surgery.

"One of the major factors for the decision was multiple fractures including those of facial bones. There was the danger of a tear to the meninges – the the layer between the skull and the brain. Thus, suturing was performed to close the wounds," said an official, adding that he was discharged after a month's treatment. Mayank recently came back to the hospital for a check-up and the doctors are happy with his condition. "He may undergo plastic surgeries after some more time."

કે. ડી. હોસ્પિટલ દ્વારા ડાયાબીટીસ અંગે જાગ્રુતક્તા ફેલાવવા માટે 'આઉટ રન ડાયાબિટીસ મેરેથોન' નું આયોજન

(પ્રતિનિધિ) અમદાવાદ, અમદાવાદમાં કે. ડી. હોસ્પિટલ દ્વારા આયોજિત મેરેથોનની જાહેરાત માટે એક પ્રેસ કોન્ફેરેન્સનું આયોજન કરવામાં આવ્યું હતું. જેમાં ડો. અદિત દેસાઈ (મેનેજીંગ ડાયરેક્ટર, કે. ડી. હોસ્પિટલ), ડો. પાર્થ દેસાઈ (સીઓઓ, કે. ડી. હોસ્પિટલ), શાન્તનું ગાંગુલી (સીએમઓ-કે. ડી. હોસ્પિટલ) અને આ સાથે મુખ્ય મેહમાન તરીકે રાજીવ ગુપ્તા (ઈન્ટરનેશનલ એથ્લેટ અને સરદાર પટેલ એવોર્ડી) અને વીરસિંગ ચૌહાણ (ડેપ્યુટી ડાયરેક્ટર, વેસ્ટર્ન રિજીઅન, સ્પોર્ટ્સ ઓથોરિટી ઓફ ઈન્ડિયા), ઉપસ્થિત રહ્યા હતા. અત્યારના સમયમાં જયારે દરેક ફેમિલીમાં આશરે ચારમાંથી એક સભ્ય ડાયાબિટીસ જેવી ગંભીર બીમારીથી પીડાઈ રહ્યો છે તેમાં આ રોગને લઈને જાગ્રુતકતા ફેલાવાના મેસેજ સાથે કે. ડી. હોસ્પિટલ દ્વારા સમાજને તંદુરસ્ત અને સ્વસ્થ બનાવવના આશય સાથે મેરેથોન ઈવેન્ટનું આયોજન કરવામાં આવ્યું છે. કે. ડી. હોસ્પિટલ મેરેથોન – "આઉટ રન ડાયાબિટીસ" માત્ર એક મેરેથોન જ નહિ પરંતુ આરોગ્યને સ્વસ્થ રાખવા માટે અને ડાયાબિટીસ જેવી બીમારી પોતાના જીવનમાં ન આવે એના માટે શું પગલાં લેવા અને કાળજી લેવી એ વિશે પણ જ્ઞાન આપશે. અલગ અલગ વર્કશોપ અને ઈન્ટરનેશનલ ટ્રેઈનર સાથે આ મેગા મેરેથોનનું આયોજન કરવામાં આવ્યું છે. આ પ્રસંગે ઉપસ્થિત કે. ડી. હોસ્પિટલના મેનેજીંગ ડાયરેક્ટર ડો. અદિત દેસાઈએ જણાવ્યું હતું, "ડાયાબિટીસ જાગરૂકતા મહિનો અને વિશ્વ ડાયાબિટીસ દિવસ ૨૦૧૮ અને ૨૦૧૯ માટેનો વિષય છે. ફેમિલી એન્ડ ડાયાબિટીસ વિશે કે. ડી. હોસ્પિટલ પરિવારોમાં સકારાત્મક જાગરૂકતા લાવવા માંગે છે. નવેમ્બર

મહિનો એ સમગ્ર વિશ્વમાં ડાયાબિટીસ અવેરનેસ મંથ તરીકે ઉજવાય છે. આ માટે આપણે ગુજરાતમાં પણ નવેમ્બર મહિનામાં આ મેરેથોનનું આયોજન કર્યું છે. આ મેરેથોન રિવરફ્રન્ટ ખાતે તા. ૧૦ નવેમ્બર, ૨૦૧૯ ના રોજ કરવામાં આવશે. સમગ્ર ગુજરાતમાંથી ૮,૦૦૦-૧૦,૦૦૦ જેટલા લોકો જોડાય તેવો આશય છે અને અમે ગુજરાતના મુખ્ય દરેક શહેરોમાં આના વિશે માહિતી મોકલી આપીશુ. આ મેરેથોન પાછળનો કે. ડી. હોસ્પિટલનો મુખ્ય ઉદ્દેશ્ય ડાયાબિટીસ વિશે એક અવેરનેસ ઉભી કરવાનો છે, કે ડાયાબિટીસ થયા પહેલા તમારે શું પગલાં લેવા જોઈએ અને જો તમે આનો સામનો કરી રહ્યા છો તો શું કાળજી રાખવી જોઈએ. શ્રી પાર્થ દેસાઈ (સીઓઓ, કે. ડી. હોસ્પિટલ) દ્વારા ઉમેરવામાં આવ્યું હતું કે, આ મેરેથોનમાં અમારા અનુભવી ડોક્ટરો દ્વારા ફ્રી ચેક અપ કેમ્પ તેમજ સમગ્ર તપાસ કરવામાં આવશે. દરેક ભાગ લેનાર લોકોને ફ્રી કોઉન્સેલિંગ પણ કરવામાં આવશે. આ મેરેથોનમાં બુધિયા સિંગ જેઓએ ૪ વર્ષની નાની વયે ૬૫ કિલોમીટર દોડ પુરી કરી યંગેસ્ટ રનરનો ખિતાબ જીતેલ છે અને તેમનાથી ઈન્સ્પાયર ઘણી ફિલ્મો દ્વારા પણ તેઓના અચિવમેન્ટ્સ રજુ કરી ચૂકેલ છે તેઓ પણ આ દોડમાં જોડાઈને અવેરનેસ ફેલાવામાં મદદરૂપ બનશે વીરસિંહ ચૌહાણ (ડેપ્યુટી ડાયરેક્ટર, વેસ્ટર્ન રિજીયન, સ્પોર્ટ્સ ઓથોરિટી ઓફ ઈન્ડિયા), જેઓ મુખ્ય મહેમાન તરીકે ઉપસ્થિત રહ્યા હતા તેઓએ ઉમેર્યું હતું કે, આવી રીતની મેરેથોન અમદાવાદમાં સૌ પ્રથમ વાર યોજવવા જઈ રહી છે અને અમે આમાં ભાગીદાર બન્યા છીએ એનો અમને ખુબ જ આનંદ છે. દરેક વ્યક્તિને પોતાનું સ્વાસ્થ્ય ડાયાબિટીસ મુક્ત રાખવામાં માટે રોજિંદા જીવનમાં દોડ કરવી જોઈએ જ અને આજે કે. ડી. હોસ્પિટલ આ મેરેથોન દ્વારા ડાયાબિટીસના દર્દીઓને લઈને આ ઈવેન્ટનું આયોજન કરેલ છે એમાં અમે તેઓની સાથે છીએ. આ પ્રસંગે ઉપસ્થિતઃ રાજીવ ગુપ્તા કે જેઓ ઈન્ટરનેશનલ એથ્લેટની સાથે ગુજરાતના સન્માનિત સરદાર પટેલ એવોર્ડી પણ બની ચૂકેલ છે, તેઓએ જણાવ્યું હતું કે, મે ૧૯૯૨ માં ચોથી એશિયન એથ્લેટિક ચેમ્પિયનશિપમાં ભાગ લીધો હતો અને મે ૩૪ દેશોમાં ૬ ક્રમસ્થાન મેળવ્યો હતો. કે. ડી. હોસ્પિટલ દ્વારા આયોજિત આ મેરેથોનમાં હું દરેક લોકોને અપીલ કરું છું કે મેરેથોનમાં જોડાવું જોઈએ અને મને વિશ્વાસ છે કે ડાયાબિટીસને લઈને જે અવેરનેસ પુરી પાડવામાં આવશે એનાથી દરેક લોકોને ફાયદો થશે અને અમદાવાદ સાથે સમગ્ર ગુજરાત વધુ સ્વસ્થ અને નિરોગી બનશે. વૈશ્વિક તબીબી અહેવાલો અનુસાર, ડાયાબિટીસનું જોખમ ભયજનક દરે ફેલાયેલું છે.

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Opt for an eye test for a healthy vision

For both adults and children alike, eye exams are an important part of one's general health. Your eyes should be checked regularly to ensure that you are able to see as best as possible. Regular eye exams will also check for signs of eye diseases or conditions that can affect not only your vision but your overall health.

Eye examination is different from eye screening

Remember, the key to keeping good vision for a lifetime starts with early detection during an eye examination and early treatment.

Eye exam for a good eye health

Eye exams are critical because many vision threatening eye diseases such as glaucoma, macular degeneration, cataracts, corneal ectatic conditions or diabetic retinopathy have no or minimal symptoms until the disease has progressed.

Vision affects a child's success in life

If your child is having trouble in school there could be an underlying vision problem. Often they don't know that the vision they are experiencing is abnormal so they aren't able to express that they need help.

Eye exams for those over 40 years

There are age-related eye conditions such as presbyopia, cataracts, and age-related macular degeneration that can begin to affect your vision and your daily life. Eye conditions once considered untreatable are now able to be corrected with cutting-edge technology. So even if you've been told in the past that your condition was untreatable, technology may have changed all that.

Dr Anuja K Desai, Cornea and Refractive surgeon, Director Academics), KD Hospital

*Views expressed are personal

માત્ર 16 કલાકમાં રેકોર્ડબ્રેક 27 બેરિયાટ્રિક સર્જરી

ભાસ્કર ન્યૂઝ | અમદાવાદ

એસજી હાઈવે પરની કે.ડી. હોસ્પિટલે 16 કલાકમાં 27 બેરિયાટ્રિક સર્જરી કરીને રેકોર્ડ સર્જ્યો છે. હોસ્પિટલના બેરિયાટ્રિક સર્જન ડો. મનીષ ખેતાને જણાવ્યું કે, 6 મે સાંજે 6 વાગ્યાથી 7 મેના સવારે 10 વાગ્યા સુધી 96થી 186 કિલો વજન ધરાવતી 16 મહિલા અને 9 પુરુષોની સર્જરી કરાઈ હતી. આ 27 સર્જરીમાં બે હાઈ રિસ્ક સર્જરી હતી. કે.ડી. હોસ્પિટલના મેનેજિંગ ડાયરેક્ટર ડો. અદિત દેસાઈ જણાવે છે કે, અમારી હોસ્પિટલ ચેરિટેબલ ટ્રસ્ટ સંચાલિત હોવા છતાં દર્દીને કોર્પોરેટ હોસ્પિટલ જેવી મેડિકલ સુવિધા બજાર કિંમત કરતાં 30થી 40 ટકા ઓછા દરે આપે છે. અમે સામાજિક પ્રવૃત્તિનાં ભાગરૂપે 3 લાખથી વધુને ખર્ચે થતી સર્જરી માત્ર 1.45 લાખમાં કરી છે.

કે.ડી.હોસ્પિટલ દ્વારા ડાયાબીટીસ અંગે જાગ્રુતકતા ફેલાવવા માટે "આઉટ રન ડાયાબિટીસ"'' મેરેથોન નું આયોજન

એજન્સી દ્વારા-અમદાવાદ, ૧૮ જુલાઈ ૨૦૧૯ : અમદાવાદમાં કે.ડી.હોસ્પિટલ દ્વારા આયોજિત મેરેથોનની જાહેરાત માટે એક પ્રેસ કોન્ફેરેન્સનું આયોજન કરવામાં આવ્યું હતું. જેમાં ડો. અદિત દેસાઈ (મેનેજીંગ ડાયરેક્ટર, કે.ડી.હોસ્પિટલ), ડો. પાર્થ દેસાઈ (સીઓઓ, કે.ડી.હોસ્પિટલ), શ્રી શાન્તનું ગાંગુલી (સીએમઓ - કે.ડી.હોસ્પિટલ) અને આ સાથે મુખ્ય મેહમાન તરીકે શ્રી રાજીવ ગુપ્તા (ઈન્ટરનેશનલ એથ્લેટ અને સરદાર પટેલ એવોર્ડી) અને શ્રી વીરસિંગ ચૌહાણ (ડેપ્યુટી ડાયરેક્ટર, વેસ્ટર્ન રિજીઅન, સ્પોર્ટ્સ ઓથોરિટી ઓફ ઈન્ડિયા), ઉપસ્થિત રહ્યા હતા. અત્યારના સમયમાં જયારે દરેક ફેમિલીમાં આશરે ચારમાંથી એક સભ્ય ડાયાબિટીસ જેવી ગંભીર બીમારીથી પીડાઈ રહ્યો છે. તેમાં આ રોગને લઈને જાગ્રુતકતા ફેલાવાના મેસેજ સાથે કે.ડી.હોસ્પિટલ દ્વારા સમાજને તંદુરસ્ત અને સ્વસ્થ બનાવવના આશય સાથે મેરેથોન ઈવેન્ટનું આયોજન કરવામાં આવ્યું છે. કે.ડી.હોસ્પિટલ મેરેથોન – "આઉટ રન ડાયાબિટીસ" માત્ર એક મેરેથોન જ નહિ પરંતુ આરોગ્યને સ્વસ્થ રાખવા માટે અને ડાયાબિટીસ જેવી બીમારી પોતાના જીવનમાં ન આવે એના માટે શું પગલાં લેવા અને કાળજી લેવી એ વિશે પણ જ્ઞાન આપશે. અલગ અલગ વર્કશોપ અને ઈન્ટરનેશનલ ટ્રેઈનર સાથે આ મેગા મેરેથોનનું આયોજન કરવામાં આવ્યું છે.

આ પ્રસંગે ઉપસ્થિત કે.ડી.હોસ્પિટલ ના મેનેજીંગ ડાયરેક્ટર ડો. અદિત દેસાઈએ જણાવ્યું હતું, "ડાયાબિટીસ જાગરૂકતા મહિનો અને વિશ્વ ડાયાબિટીસ દિવસ ૨૦૧૮ અને ૨૦૧૯ માટેનો વિષય છે ફેમિલી એન્ડ ડાયાબિટીસ વિશે કે.ડી હોસ્પિટલ પરિવારોમાં સકારાત્મક જાગરૂકતા લાવવા માંગે છે. નવેમ્બર મહિનો એ સમગ્ર વિશ્વમાં ડાયાબિટીસ અવેરનેસ મંથ તરીકે ઉજવાય છે આ માટે આપણે ગુજરાતમાં પણ નવેમ્બર મહિનામાં આ મેરેથોનનું આયોજન કર્યું છે. આ મેરેથોન રિવરફ્રન્ટ ખાતે તા. ૧૦ નવેમ્બર ૨૦૧૯ ના રોજ કરવામાં આવશે. સમગ્ર ગુજરાતમાંથી ૮,૦૦૦ - ૧૦,૦૦૦ જેટલા લોકો જોડાય તેવો આશય છે અને અમે ગુજરાતના મુખ્ય દરેક શહેરોમાં આના વિશે માહિતી મોકલી આપીશુ. આ મેરેથોન પાછળનો કે.ડી.હોસ્પિટલ નો મુખ્ય ઉદ્દેશ્ય ડાયાબિટીસ વિશે એક અવેરનેસ ઉભી કરવાનો છે, કે ડાયાબિટીસ થયા પહેલા તમારે શું પગલાં લેવા જોઈએ અને જો તમે આનો સામનો કરી રહ્યા છો તો શું કાળજી રાખવી જોઈએ.

શ્રી પાર્થ દેસાઈ (સીઓઓ, કે.ડી.હોસ્પિટલ) દ્વારા ઉમેરવામાં આવ્યું હતું કે, આ મેરેથોનમાં અમારા અનુભવી ડોક્ટરો દ્વારા ફ્રી ચેક અપ કેમ્પ તેમજ સમગ્ર તપાસ કરવામાં આવશે. દરેક ભાગ લેનાર લોકોને ફ્રી કોઉન્સેલિંગ પણ કરવામાં આવશે. આ મેરેથોનમાં શ્રી. બુધિયા સિંગ જેઓએ ૪ વર્ષની નાની વયે ૬૫ કિલોમીટર દોડ પુરી કરી યંગેસ્ટ રનરનો ખિતાબ જીતેલ છે અને તેમનાથી ઈન્સ્પાયર ઘણી ફિલ્મો દ્વારા પણ તેઓના અચિવમેન્ટ્સ રજુ કરી ચૂકેલ છે તેઓ પણ આ દોડમાં જોડાઈને અવેરનેસ ફેલાવામાં મદદરૂપ બનશે.

શ્રી વીરસિંહ ચૌહાણ (ડેપ્યુટી ડાયરેક્ટર, વેસ્ટર્ન રિજીયન, સ્પોર્ટ્સ ઓથોરિટી ઓફ ઈન્ડિયા), જેઓ મુખ્ય મહેમાન તરીકે ઉપસ્થિત રહ્યા હતા તેઓએ ઉમેર્યું હતું કે, આવી રીતની મેરેથોન અમદાવાદમાં સૌ પ્રથમ વાર યોજવવા જઈ રહી છે અને અમે આમાં ભાગીદાર બન્યા છીએ એનો અમને ખુબ જ આનંદ છે. દરેક વ્યક્તિને પોતાનું સ્વાસ્થ્ય ડાયાબિટીસ મુક્ત રાખવામાં માટે રોજિંદા જીવનમાં દોડ કરવી જોઈએ જ અને આજે કે.ડી.હોસ્પિટલ આ મેરેથોન દ્વારા ડાયાબિટીસના દર્દીઓને લઈને આ ઈવેન્ટનું આયોજન કરેલ છે એમાં અમે તેઓની સાથે છીએ.

શહેરમાં ૧૬થી ૧૮ ટકા લોકો ડાયાબિટીસથી પીડાઈ રહ્યાં છે

સિટીમાં 'આઉટ રન ડાયાબિટીસ'ની મેરેથોનનું આયોજન

વૈશ્વિક તબીબી અહેવાલો અનુસાર ડાયાબિટીસનું જોખમ ભયજનક દરે ફેલાયેલું છે. આજે દર ૨માથી ૧ વ્યક્તિ ડાયાબિટીસથી પીડાય છે. વિશ્વભરમાં આશરે ૨૧૨ મિલિયન લોકોનું હજુ પણ નિદાન થતું નથી. રુઢિચુસ્ત આંકડા અનુસાર, રાજ્યમાં ૧૦ થી ૧૨ ટકા પુખ્ત વસતી ડાયાબિટીસથી પીડાય છે. શહેરી વિસ્તારોમાં ઘટનાઓ ૧૬થી ૧૮ ટકા જેટલી ઊંચી હોય છે. આ સમસ્યા દિવસેને દિવસે વધુ ગંભીર થઈ રહી છે. આથી સમાજને તંદુરસ્ત બનાવવા અને રોગ વિશે જાગૃતતા ફેલાવવાનાં ઉદેશથી અમદાવાદની કે.ડી. હોસ્પિટલ દ્વારા મેરેથોનનું આયોજન કરવામાં આવ્યું છે.

ડાયાબિટિસનાં રોગ અંગે જાગૃતતા ફેલાવવા વિશ્વ ડાયાબિટીસ માસમાં આઉટ રન ડાયાબિટીસ નામે એક કાર્યક્રમનું આયોજન કરેલ છે. જેમાં સમગ્ર ગુજરાતમાંથી ૮,૦૦૦થી ૧૦,૦૦૦ લોકો જોડાય તેવો આશય છે. તેમાં ડાયાબિટીસ અંગે શું કાળજી રાખવી જોઈએ તે અંગેની માહિતી પણ આપવામાં આવશે. આ મેરેથોનમાં બુધિયાસિંગ જેઓ ૪ વર્ષની ઉંમરે ૬૫ કિલોમીટરની દોડ પૂરી કરીને યંગેસ્ટ રનરનો ખિતાબ જીતેલ છે. તેઓ પણ આ દોડમાં જોડાઈને અવેરનેસ ફેલાવવામાં મદદરૂપ બનશે. આ ઉપરાંત વીરસિંહ ચૌહાણ જેઓ ડેપ્યુટી ડાયરેક્ટર, વેસ્ટર્ન રિજિયન, સ્પોર્ટ્સ ઓથોરિટી ઓફ ઈન્ડિયા છે તેમણે મુખ્ય મહેમાન તરીકે ઉપસ્થિત રહીને જણાવ્યું હતું કે, આવી મેરેથોન અમદાવાદમાં સૌ પ્રથમ વાર યોજાવા જઈ રહી છે અને દરેક વ્યક્તિએ પોતાનું સ્વાસ્થ્ય ડાયાબિટીસ મુક્ત રાખવા દોડ કરવી જોઈએ.

આ મેરેથોનમાં અનુભવી ડોકટરો દ્વારા ફ્રી ચેક અપ અને સમગ્ર તપાસ કરવામાં આવશે. દરેક ભાગ લેનાર લોકોને ફ્રીમાં કાઉન્સિલિંગ કરવામાં આવશે. ૨૦૧૮-૧૯નો સૌથી ભયજનક પ્રશ્ન ડાયાબિટીસ છે, તે અંગે બની શકે તેટલા વધુ લોકોને અવેર કરીને તેમને ડાયાબિટીસથી છુટકારો અપાવવાનો આશય છે.

- પાર્થ દેસાઈ, સીઈઓ, કે.ડી. હોસ્પિટલ

KD Hospital to organize marathon on diabetes:

City-based KD Hospital will organize 'Outrun Diabetes' marathon on November 10 to mark the Diabetes Month. Organizers said, about 10,000 participants are expected to run in the event. All participants would get a free check-up, they added.

IPS સંજય શ્રીવાસ્તવને કોરોના થયો નથી

ફેફસાંનું ઈન્ફેકશન થતાં પોલીસ કમિશનર હોસ્પિટલમાં દાખલ

અમદાવાદ,સોમવાર

અમદાવાદ શહેર પોલીસ કમિશનર સંજય શ્રીવાસ્તવને હોસ્પિટલમાં દાખલ કરવામાં આવ્યાં છે. પોલીસ કમિશનરને તાવ આવ્યાં પછી ફેફસાંનું ઈન્ફેકશન હોવાનું જણાતાં કે.ડી. હોસ્પિટલમાં સારવાર અપાઈ રહી છે અને તબિયત સુધારા પર છે. શહેર પોલીસના ઊચ્ચ સૂત્રોએ સ્પષ્ટ કર્યુ છે કે, પોલીસ કમિશનર સંજય શ્રીવાસ્વતને કોરોના થયો નથી અને ફેફસાંના ઈન્ફેકશનની સારવાર પછી તબિયત સુધારા પર છે.

તાવ આવ્યા પછી ફેફસાંમાં ઈન્ફેકશનનો રિપોર્ટ આવતાં કે.ડી. હોસ્પિટલમાં તબિયતમાં સુધારો

અમદાવાદના પોલીસ કમિશનર સંજય શ્રીવાસ્તવ રવિવારે તાવ આવ્યાં પછી તબીબી ચકાસણી કરાવી હતી. તબીબી તપાસમાં પોલીસ કમિશનરને ફેફસામાં ઈન્ફેકશન હોવાનુ જણાઈ આવ્યું હતું. તબીબી સૂત્રોએ જણાવ્યું કે, આઈ.પી.એસ. સંજય શ્રીવાસ્તવને સામાન્ય લંગ્સ ઈન્ફેકશન છે અને તેમની તબિયત સુધારા પર છે. પોલીસ કમિશનરને તાવ હતો અને ફેફસામાં ઈન્ફેકશન જ જણાયું છે. તેમને કોરોના થયો હોય તેવા કોઈ ચિહ્નો તબીબી તપાસણીમાં જણાયાં નથી. તેમને વહેલામાં વહેલી તકે હોસ્પિટલમાંથી રજા આપવામાં આવશે.

પોલીસ કમિશનરને લંગ્સ ઈન્ફેકશન અને તાવ હોવાથી કોરોના હોવાની ચર્ચા પોલીસ તંત્રમાં શરુ થઈ હતી. જો કે, સત્તાવાર સૂત્રોએ સ્પષ્ટ કર્યુ છે કે, પોલીસ

(અનુસંધાન ૪થે પાને)

લિપોમાની સર્જરી બાદ હોસ્પિટલમાં રજા અપાઈ

ગૃહમંત્રી અમિત શાહે અમદાવાદમાં ગરદનના ભાગે નાની સર્જરી કરાવી

સ્વગૃહે અમિત શાહનું રોકાણ લંબાયું, કાલે દિલ્હી જશે

। ગાંધીનગર ।

ભારતના ગૃહમંત્રી અને ભાજપના રાષ્ટ્રીય અધ્યક્ષ અમિત શાહ બુધવારે સવારે અમદાવાદમાં વૈષ્ણોદેવી સર્કલ પાસે આવેલી કેડી હોસ્પિટલમાં દાખલ થયા હતા. તેમણે ગળાના પાછળના ભાગે લિપોમાની સર્જરી કરાવી હતી. સાવ નાના ઓપરેશન બાદ તેમને હોસ્પિટલમાંથી રજા અપાઈ છે. અગાઉ તેઓ ગુરૂવારની સવારે પરત જવાના હતા પરંતુ તેમનુ રોકાણ લંબાયુ છે અને હવે શુક્રવારની સવારે દિલ્હી જશે.

અમિત શાહ મંગળવારે મોડી રાત્રે અમદાવાદ એરપોર્ટ આવી પહોંચ્યા હતા. જ્યાં તેમનું સ્વાગત પ્રદેશ ભાજપ અધ્યક્ષ જીતુ વાઘાણી અને ગૃહમંત્રી પ્રદિપસિંહ જાડેજાએ કર્યું હતું. બુધવારની સવારે કેડી હોસ્પિટલના મેનેજિંગ ડિરેક્ટર ડૉ. અદિત દેસાઈએ પ્રેસ રિલીઝ દ્વારા મેડિકલ બુલેટીન જાહેર કરીને જણાવ્યુ હતુ કે, "ગૃહમંત્રી અમિત શાહને સવારે ૯ કલાકે હોસ્પિટલમાં દાખલ કરવામાં આવ્યા હતા. એનેસ્થેસિયાની મદદથી તેમના ગળાના પાછળના ભાગે નીચેની તરફ લિપોમાનું ઓપરેશન કરવામાં આવ્યુ છે. આ એક નાની સર્જરી છે. તેમને રજા આપવામાં આવી છે"

સર્જરી બાદ અમિત શાહ થલતેજ સ્થિત પોતાના નિવાસસ્થાને આરામ પર છે, પ્રદેશના નેતાઓએ ફોન કરીને ખબર અંતર પુછયાનું તેમના નિકટવર્તી સુત્રોએ જણાવ્યું હતું. અગાઉ ૬ઠ્ઠી સપ્ટેમ્બરને શુક્રવારે ગાંધીનગરમાં કૃષિ વિષયક પ્રદર્શન અને વિજાપુર પાસે સાબરમતી નદીમાં રૂ.૨૩૧ કરોડના ખર્ચે નિર્માણ થનારા બેરેજના ખાતમુહૂર્ત માટે ગૃહમંત્રી અમિત શાહે સમય ફાળવ્યો હતો. અત્યંત વ્યસ્ત શિડ્યુલમાં તબીબો દ્વારા સર્જરીના સુચન પછી આ બંને કાર્યક્રમ રદ કરવામાં આવ્યા છે. મહાત્મા મંદિરમાં શરૂ થનારા ત્રણ દિવસના કૃષિ વિષયક પ્રદર્શનનું ઉદઘાટન ભારત સરકારના કૃષિમંત્રી નરેન્દ્રસિંઘ તોમરના હસ્તે થશે. જ્યારે સાબરમતી નદીમાં હીરપુરા બેરેજના ખાતમુહૂર્તને હાલ પૂરતું મોકૂફ રાખવામાં આવ્યુ છે. રાજ્યના સિંચાઈ વિભાગે મુખ્યમંત્રી સ્તરેથી ગૃહમંત્રીનો નવેસરથી સમય લઈને ખાતમુહૂર્ત કરવામાં આવશે તેમ જણાવ્યું હતું.

Gujarati housewives more prone to obesity

17.7% of women against 11.6% males in Gujarat is obese, says study; doctors blame it on sedentary lifestyle, diet

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Even as the number of women suffering from obesity is on a rise, it is the housewives who are most prone to the silent disease. The Lancet study published in 2018 revealed that 17.7% women in Gujarat suffer from obesity against the 11.6% of males hailing from the region. Doctors across the city are taking cognisance of the increasing number of obese women, with more emphasis on housewives, in Gujarat.

Dr Manish Khaitan, Bariatric Surgeon at KD Hospital, revealed that out of the 27 patients he operated for obesity on May 6 and 7, 18 were females. The patients were operated at a reduced cost of Rs 1.45 lakh against the usual starting from Rs 3 lakh. Patients from across the State were operated and most of them were discharged on Thursday after necessary tests. The exercise was undertaken as a part of the hospital's first anniversary on May 7.

Varsha Fulwala (57), a housewife, before and after undergoing bariatric surgery

> "People in Gujarat need to be extra cautious against obesity as most of the local dishes are sweet and there is an increasing culture of junk food from an early age
> -Dr Manish Khaitan, bariatric surgeon, KD Hospital

According to Khaitan, people in Gujarat need to be extra cautious against obesity as most of the local dishes are sweet and there is an increasing culture of junk food from an early age.

"60% of the obese patients who approach me are women. Post marriage, many women turn housewives and unfortunately lose a track of their schedule in trying to fulfil the family members' ambitions, especially after pregnancy. This is where social isolation also plays a role and changes their eating habits. The constant hormonal changes due to emotional and physical shift add to weight gain, which results in obesity," said Dr Khaitan. He added that the inactive routine at home induces stress-eating, leading to obesity.

Dr Adit Desai, MD of KD Hospital, said, "The instruments used in bariatric surgery are expensive. We reduced the rate to almost half to recover the cost and provide a relief to the patients as part of our Customer Social Responsibility on first anniversary of the hospital."

Talking about effectiveness of bariatric surgery, Varsha Fulwala (57), a housewife residing in Jivraj Park, said, "My weight was 54 kg, but after marriage it kept increasing. By the time I was 50, it touched 118 kg and I could not even walk. Obesity took a toll on me and I used to be bed-ridden. The post-marriage emotional and physical changes added to my woes. After the surgery, I now weigh 64 kg."

निजी दौरे पर अहमदाबाद आए हैं केन्द्रीय गृह मंत्री

अमित शाह अस्पताल में दाखिल, छोटी सर्जरी के बाद मिली छुट्टी

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अहमदाबाद. केन्द्रीय गृह मंत्री व भारतीय जनता पार्टी के राष्ट्रीय अध्यक्ष अमित शाह को बुधवार को शहर स्थित एक अस्पताल में छोटी सर्जरी के बाद छुट्टी दे दी गई। मंगलवार रात निजी दौरे पर अहमदाबाद आए शाह को शहर में वैष्णोदेवी चौराहे के पास स्थित के डी अस्पताल में बुधवार सुबह 9 बजे दाखिल किया गया था। अस्पताल के प्रबंध निदेशक डॉ अदित देसाई के अनुसार केन्द्रीय गृह मंत्री के अस्पताल में दाखिल करने के बाद उनके गर्दन के पीछे लिपोमा को लेकर सफल ऑपरेशन किया गया। इस छोटी सर्जरी के बाद उन्हें अस्पताल से छुट्टी दे दी गई। बताया जाता है कि बुधवार को उन्होंने शहर के थलतेज स्थित अपने निवास स्थान पर आराम किया और परिवार के सदस्यों के साथ समय बिताया। उनके गुरुवार शाम तक अहमदाबाद में ही रहने की संभावना है। शाह ने पिछले एक सप्ताह में दूसरी बार अहमदाबाद का दौरा किया। वे गत महीने 29 अगस्त को गांधीनगर स्थित पंडित दीनदयाल पेट्रोलियम विश्वविद्यालय के दीक्षांत समारोह तथा अहमदाबाद महानगरपालिका से जुड़ी कई योजनाओं के कार्यक्रम के लिएयहां आए थे।

गत पहली सितम्बर को उन्होंने दादरा नगर हवेली के मुख्यालय सिलवासा का दौरा किया था।

'आउट रन डायाबिटीस' मेरेथॉन 10 नवम्बर को

अहमदाबाद

अहमदाबाद में के. डी. हॉस्पिटल द्वारा आयोजित मेरेथॉन की घोषणा के लिए एक प्रेस कॉन्फ्रेंस का आयोजन किया गया जिसमें डॉ. अदित देसाई (मैनेजिंग डायरेक्टर, के. डी. हॉस्पिटल), डॉ. पार्थ देसाई (सीईओ, के. डी. हॅास्पिटल), शांतनु गांगुली (सीएफओ, के. डी.

हॉस्पिटल) और मुख्य अतिथि के रूप में राजीव गुप्ता (इंटरनेशनल एथलेट और सरदार पटेल अवार्डी) तथा वीरसिंह चौहान (डिप्टी डायरेक्टर, वेस्टर्न रिजियन, स्पोर्ट्स अथॉरिटी ऑफ इंडिया) उपस्थित थे। वर्तमान समय में जबकि प्रत्येक फैमिली में लगभग चार में से एक सदस्य डायाबिटीज जैसी गम्भीर बीमारी से पीड़ित हैं। इसमें इस रोग को लेकर जागरुकता फैलाने के मैसेज के साथ के. डी. हॉस्पिटल द्वारा समाज को स्वस्थ बनाने के आशय के साथ ... है। के. ... यबिटीज सिर्फ एक मेरैथॉन नहीं बल्कि स्वस्थ रखने और डायबिटीज जैसी बीमारी जीवन में नहीं आए, इसके लिए क्या कदम उठाएं और सावधानी रखें, इसकी जानकारी दी जाएगी। अलग-अलग वर्कशॉप और इंटरनेशनल ट्रेनर के साथ इस मेगा मेरेथॉन का आयोजन किया गया है। इस अवसर पर उपस्थित के. डी. हॉस्पिटल के मैनेजिंग डायरेक्टर डॉ. आदित्य देसाई ने कहा कि नवम्बर का महीने पूरे विश्व में डायबिटीज अवेयरनेस मंथ के रूप में मनाया जाता है। इसीलिए हमने गुजरात में भी नवम्बर महीने में इस मेरेथॉन का आयोजन किया है। यह मेरेथॉन 10 नवम्बर 2019 को ईयोजित की जाएगी। पूरे गुजरात से आठ से 10 हजार लोगों के शामिल होने की संभावना है। इस मेरेथॉन को आयोजित करने का के. डी. हॉस्पिटल का मुख्य उद्देश्य डायबिटीज के संबंध में एक अवेयरनेस पैदा करना है।

http://gujaratvaibhav.com

કે.ડી.હોસ્પિટલ દ્વારા

શહેરમાં ડાયાબિટીસ અંગે જાગૃતિ ફેલાવવા માટે મેરેથોનનું આયોજન

અમદાવાદ તા.૧૮

ડાયાબિટીસ જેવી ગંભીર બિમારીને લઈ સમાજમાં જાગૃતતા ફેલાવવાના ઉદ્દેશથી શહેરની કે.ડી.હોસ્પિટલ દ્વારા આગામી નવેમ્બર મહિનામાં 'આઉટ રન ડાયાબિટીસ' મેરેથોનનું આયોજન કરવામાં આવ્યું છે.

આ અંગે કે.ડી.હોસ્પિટલના મેનેજીંગ ડાયરેકટર ડો. અદિતી દેસાઈએ જણાવ્યું હતું કે,નવેમ્બર મહિનો એ સમગ્ર વિશ્વમાં ડાયાબિટીસ અવેરનેસ મંથ તરીકે ઉજવાય છે.આ માટે નવેમ્બર મહિનામાં મેરેથોનનું આયોજન કર્યું છે. આ મેરેથોન રિવરફ્રન્ટ ખાતે આગામી તા.૧૦નવેમ્બર ૨૦૧૯ના રોજ કરવામાં આવશે. જેમાં ગુજરાતમાંથી ૮,૦૦૦-૧૦,૦૦૦ જેટલા લોકો જોડાય તેવો આશય છે. આ મેરેથોન પાછળોનો મુખ્ય ઉદ્દેશ્ય ડાયાબિટીસ વિશે અવેરનેસ ઉભી કરવાનો છે.

કે.ડી.હોસ્પિટલના સીઈઓ પાર્થ દેસાઈએ જણાવ્યું હતું કે,મેરેથોનમાં તબીબો દ્વારા ફ્રી ચેક અપ કેમ્પ તથા ચકાસણી કાર્યક્રમ કરવામાં આવશે. જેમાં દરેક ભાગ લેનાર લોકોને ફ્રી કાઉન્સિલીંગ પણ કરાશે.

આ પ્રસંગે ઉપસ્થિત વીરસિંહ ચૌહાણે (ડેપ્યુટી ડાયરેકટર વેસ્ટર્ન રીજીયન,સ્પોર્ટસ ઓથો.ઓફ ઈન્ડિયા) એ ઉમેર્યું હતું કે,દરેક વ્યક્તિને પોતાનું સ્વાસ્થ્ય ડાયાબિટીસ મુક્ત રાખવા રોજિંદા જીવનમાં દોડ કરવી જોઈએ. ઈન્ટરનેશનલ એથ્લેટ રાજીવગુપ્તાએ જણાવ્યું હતું કે,મેરેથોનમાં ડાયાબિટીસને લઈને જાગૃતિ પુરી પાડવામાં આવશે. તેનાથી દરેકને ફાયદો થશે.

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અમદાવાદમાં અમિત શાહના ગળાની પાછળ થયેલી રસોળીનું ઓપરેશન

કે.ડી. હોસ્પિટલમાં ઓપરેશન બાદ 15 મિનિટમાં જ રજા અપાઈ

ભાસ્કર ન્યૂઝ | ગાંધીનગર

એસ જી હાઈવે પર વૈષ્ણોદેવી મંદિર સર્કલ પાસેની કેડી હોસ્પિટલમાં કેન્દ્રીય ગૃહમંત્રી અમિત શાહના ગળાના પાછળના ભાગે થયેલી રસોળીને પંદર મિનિટની સર્જરીથી દૂર કરીને બપોરે રજા પણ આપી દેવાઈ હતી. આ ઓપરેશન માટે ગૃહમંત્રી વિશેષ પ્રોટોકોલ સિવાય જાતે જ સવારે નવ વાગ્યા પહેલાં હોસ્પિટલ પહોંચી ગયા હતા.

હોસ્પિટલના મેનેજિંગ ડિરેક્ટર અદિતિ શાહના જણાવ્યા મુજબ, કેન્દ્રીય ગૃહમંત્રી અમિત શાહને નવ વાગ્યે દાખલ કરવામાં આવ્યા હતા અને તેમના ગરદનની પાછળના ભાગે થયેલી આ રસોળીની સફળ સર્જરી તેમને લોકલ એનેસ્થેશિયા એટલે કે બેભાન કર્યાં વગર અને સંબંધિત ભાગની ચામડીને બહેરી કરીને જ કરવામાં આવી. ટૂંક સમયમાં જ તેમને હોસ્પિટલમાંથી રજા આપી દેવામાં આવી છે.

શાહની નજીકના લોકોના જણાવ્યાં અનુસાર, રસોળીની ગાંઠ તેમને ઘણાં સમયથી હતી, પરંતુ તેમને કોઈ તકલીફ ન હત. જોકે થોડા સમયથી તેના કદમાં વધારો થતાં શાહને દુખાવાની ફરિયાદ રહેતી હતી જેથી ડોક્ટરે ગાંઠ સર્જરીથી દૂર કરવાની સલાહ આપી હતી.

ગુરુવારે શાહ દિલ્હી જવા રવાના થશે

રસોળીના ઓપરેશન બાદ અમિત શાહને 15 મિનિટમાં જ રજા આપી દેવાઈ હતી. જોકે સૂત્રોના જણાવ્યાનુંસાર શાહ ગુરુવારે સવારે દિલ્હી જવા રવાના થશે.

ગુજરાતમાં પ્રથમવાર ૧૬ કલાકમાં ૨૭ સફળ બેરિયાટ્રિક સર્જરી કરાઈ

અમદાવાદ, ગુરુવાર

ફાસ્ટફૂડના વધતાં જતાં ચલણ અને આધુનિક જીવનશૈલીને પગલે ગુજરાતમાં મેદસ્વિતાના પ્રમાણમાં સતત વધારો થઈ રહ્યો છે. મેદસ્વિતાનો શિકાર અનેક વ્યક્તિ એવી પણ હોય છે જેમનું વજન ૧૦૦ કિલોગ્રામથી પણ વધારે હોય છે. આ સ્થિતિમાં તેમની મેદસ્વિતા દૂર કરવા માટે બેરિયાટ્રિક સર્જરી ખૂબ જ મદદરૂપ થત હોય છે. ગુજરાતમાં હવે પ્રથમ વખત ૧૬ કલાકમાં ૨૭ સફળ બેરિયાટ્રીક સર્જરીનો રેકોર્ડ સર્જાયો છે.

સર્જરી કરવામાં આવી તે ૨૭ દર્દીઓ ૧૨૫થી ૧૮૦ કિગ્રા સુધી વજન ધરાવતા હતા

આ અંગે પ્રાપ્ત માહિતી અનુસાર અમદાવાદની કે.ડી. હોસ્પિટલ અને બેરિયાટ્રિક સર્જન ડો. મનિષ ખેતાન દ્વારા વજન ઓછું કરવાની ૨૭ બેરિયાટ્રિક સર્જરી ૧૬ કલાકમાં હાથ ધરાઈ હતી. ડો. આદિત દેસાઈએ જણાવ્યું હતું કે, 'કોર્પોરેટ સોશિયલ રીસ્પોન્સિબિલિટિના ભાગરૂપે સામાન્ય કરતાં ઓછા ખર્ચે આ સર્જરી કરવામાં આવી હતી. આ સર્જરી કરાઈ તેમાં ચાર દર્દી એવા હતા જેઓ મેદસ્વિતાને કારણે ચાલી પણ માંડ શકતા હતા.'

આ અંગે ડો. ખેતાને જણાવ્યું હતું કે, '૬ મેના સાંજે ૬ વાગ્યે અમે આ સર્જરીનો પ્રારંભ કર્યો હતો અને ૭ મેના સવારે ૧૦ વાગ્યે છેલ્લી સર્જરી કરાઈ હતી. સર્જરી કરવામાં આવી તેવા ૨૭ દર્દીઓ ૧૨૫થી ૧૮૦ કિલોગ્રામનું વજન ધરાવતા હતા અને તેમાં ૧૮ મહિલા-૯ પુરુષનો સમાવેશ થતો હતો. સર્જરીના થોડા કલાકોમાં આ દર્દીઓને રજા પણ આપી દેવાઈ છે.'

મણિનગરમાં રામબાગ પાસે બીઆરટીએસ બસમાંથી ધૂમાડા નીકળતા દોડધામ મચી

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મણિનગરમાં રામબાગ પાસે આજે સવારે બીઆરટીએસ બસમાંથી ધૂમાળા નીકળતા દોડધામ મચી જવા પામી હતી. બસ ડ્રાયવરે સમયસુચકતા વાપરીને મોટી દુર્ઘટના સર્જાય તે પહેલા બસ રોકીને તમામ મુસાફરોને સલામત રીતે નીચે ઉતારી દીધા હતા. બસના પાછળ આવેલા એર સસ્પેન્શનમાં ટેકનીકલ ખામી સર્જાતા

Amit Shah undergoes minor surgery at KD Hospital

Times News Network

Gandhinagar: Union home minister and Gandhinagar MP **Amit Shah** was admitted to KD Hospital on SG Road here on Wednesday for a minor surgery to remove a lipoma or a lump under the skin on the back of his neck. He was discharged within a few hours of being admitted.

Sources said Shah will take rest at his house in Ahmedabad before leaving for Delhi on the morning of September 6. Shah was admitted to Kusum Dhirajlal (KD) Hospital near Vaishnodevi Circle on SG Road on Wednesday morning. The managing director of the hospital, Dr Adit Desai, issued a statement after the operation. He said, "'Today, Mr Amit Shah, honourable home minister of India, was admitted at about 9am at K D Hospital, Ahmedabad. He was successfully operated for lipoma on the back side of his neck under local anaesthesia. After this minor surgery he has been discharged."

Shah has not scheduled any meeting with state government or party functionaries and is expected to recover spending the time with his family during his stay in Ahmedabad.

What is lipoma

A non-threatening lump of adipocytes (fat cells) is called a lipoma. Doctors consider lipomas to be non-cancerous. They are common on the skin and are found anywhere on the body. They may be surgically removed for cosmetic reasons or if causing any pain, complications or other symptoms.

શહેરની કે.ડી. હોસ્પિટલના તબીબોની ટીમ દ્વારા ભારતના સૌથી લાંબા વ્યક્તિ ધર્મેન્દ્ર પ્રતાપસિંઘની હિપ રિપ્લેસમેન્ટ સર્જરી સફળતાપૂર્વક કરવામાં આવી હતી.

કે.ડી. હોસ્પિટલના તબીબો દ્વારા

ભારતના સૌથી લાંબા વ્યક્તિની સફળ હિપ રિપ્લેસમેન્ટ સર્જરી

અમદાવાદ,તા.૨૪

ભારતના સૌથી લાંબા વ્યક્તિની શહેરની કે.ડી. હોસ્પિટલમાં સફળ બંને પગની હિપ રિપ્લેસમેન્ટ સર્જરી કરવામાં આવી છે. ધર્મેન્દ્ર પ્રતાપસિંધ, ભારતનો સૌથી લાંબા વ્યક્તિ પ્રતાપગઢ (લખનૌ, યુપી)ના એ એમની ઊંચાઈ ૮ ફૂટ ૧ ઈંચ છે. જે વિશ્વ રેકોર્ડથી ફકત ૨ ઈંચ નાના છે. એમને ૯ વર્ષથી થાપાના સાંધાના દુઃખાવાને કારણે ચાલવામાં તકલીફ અને દૈનિક પ્રવૃત્તિઓ કરવામાં મુશ્કેલી આવી રહી હતી.

સર્જરીમાં વધારે ઊંચાઈના લીધે બધી જ વ્યવસ્થા કરવીએ મોટો પડકાર હતો

તેઓ બેંકમાંથી ઊભા થાય ત્યારે એમને પોતાની પીઠને ટેકો આપવાની જરૂર પડતી હતી. અને જ્યારે એ ઊભા રહેવાનો કે ચાલવાની પ્રયત્ન કરતાં ત્યારે ખૂબ જ તકલીફ થતી હતી. દુઃખાવો અસહ્ય થવા લાગતો હતો એ ઓછામાં ઓછા ખર્ચામાં પોતાની સારવાર કરવા માંગતા હતા.

કે.ડી. હોસ્પિટલમાં તેમના બંને થાપાની સર્જરી સફળતાપૂર્વક કરવામાં આવી છે. સર્જરીમાં તેમની ઊંચાઈના આધારે બધી વ્યવસ્થા કરવી એ સૌથી મોટો પડકાર હતો. જમણી ૬૮ સાઈઝની એસિટાબ્યુલર કપનો ઉપયોગ કરવામાં આવ્યો હતો અને ડાબી બાજુ ૭૦ સાઈઝનો કપ ઉપયોગ કરવામાં આવ્યો હતો. હવે તેઓ ધીરે ધીરે સ્વસ્થ થઈ રહ્યા છે અને સામાન્ય ટેકા સાથે અને પીડા વિના ચાલવામાં સક્ષમ છે:

સિનિયર જોઈન્ટ રિપ્લેસમેન્ટ સર્જન ડો. અતીત શર્મા, ડો. અમીર સંઘવી, ડો. હેમાંગ અંબાણી, ડો. ચિરાગ પટેલ, અને કે.ડી. હોસ્પિટલના સ્ટાફ દ્વારા તમામ અને કે.ડી. હોસ્પિટલમાં ઉપલબ્ધ વિસ્તૃત માળખાગત સુવિધાઓ અને નિષ્ણાતોની સારવાર ભારતનો સૌથી ઉંચો વ્યક્તિ ફરીથી ઊભો છે. કે.ડી. હોસ્પિટલમાં આવી સર્જરી હાથ ધરવા માટે પુરતી સુવિધાઓ ઉપલબ્ધ હોવાને કારણે, માનવતાની દૃષ્ટિએ સારવાર વિના મૂલ્યે કરવામાં આવી હતી.

के.डी.अस्पताल में भारत के सबसे लंबे आदमी की सफल दोनों पांव के हिप रिप्लेसमेन्ट..

अहमदाबाद, 24 सितम्बर। भारत के सबसे लंबे आदमी धर्मेन्द्र प्रतापसिंह (उम्र 40)जो प्रतापगढ यूपी, लखनऊ से है। जिसकी लंबाई 8 फुट 1 इंच विश्व रिकार्ड से केवल 2 इंच कम है, जिसे पिछले 6 वर्ष से चलने में तकलीफ हो रही थी, और दिनचर्या के कार्य में भी परेशानी हो रही थी। उन्हें बेड से खड़े होने में भी पीठ का सपोर्ट करना पडता था और अधिक देर खड़े रहने पर पैर में दर्द होने लगता था। वे कम से कम खर्च मे अपना उपचार कराना चाहते थे, जिससे उसे इस लंबे दर्द से राहत मिल सके। उसे चलने के लिए उसके साईज की बैशाखी भी नहीं मिल रही थी, वे मात्र एक बांस की लकडी के सहारे चल रहे थे। जिनकी शहर के के.डी. अस्पताल में हिप रिप्लेसमेन्ट की सर्जरी सफलता पूर्वक की गई थी. इस सर्जरी में उनकी ऊंचाई के अनुसार सभी वस्तुओं का प्रबंध करना सबसे बड़ी चुनौति थी। दायी ओर 68 साईज का एसीटाब्युलर कप और बायी ओर 70 साईज का उपयोग किया गया था, जबकि नियमित रुप से 52 और 54 साईज का उपयोग किया जाता है। दायी ओर फेमोरल स्टेम साईज 16और बायी ओर 23 का उपयोग किया गया था, जबकि सामान्य तौर पर 11 और 12 साईज का उपयोग होता है। अब वे धीरे धीरे स्वस्थ हो रहे है, और कम से कम सहारे के बगैर बिना दर्द के चलने में सक्षम हो गए हैं, उनके कथनानुसार अब वह अपनी तकलीफ और दर्द से काफी हद तक मुक्त हो गए हैं। के.डी. अस्पताल के सिनियर सर्जन डॉ.अतीत शर्मा, डॉ.अमीर संघवी, डॉ. हेमांग अंबानी, डॉ. चिराग पटेल के एक्सपर्ट उपचार, अथक प्रयास और स्टॉफ के विस्तृत ध्यान और के.डी. अस्पताल के व्यापक सुविधाओ के कारण भारत का सबसे लंबा आदमी आज पुनः अपने पैर पर खड़ा हो गया है। केस की विशिष्टता और के.डी.अस्पताल में उपलब्ध सुविधा के कारण ऐसी सर्जरी मानवता के हित में बगैर किसी शुल्क के की गई थी। टोटल हिप रिप्लेसमेन्ट सर्जरी क्या है इस पर डॉ. अतीत शर्मा का कहना था कि जिनको हिप जोइंट में आर्थाराईटिस फ्रेक्चर, रक्त की कमी या किसी अन्य कारण से दिनचर्या जैसे कि कार चलाने, कुर्सी में बैठने या उठने से दर्द या तकलीफ हो उनको हिप रिप्लेसमेन्ट सर्जरी के द्वारा सम्पूर्ण दर्द मुक्त किया जा सकता है। हिप रिप्लेसमेन्ट सर्जरी में हिप जाइंट प्रोस्थेटिक ईम्प्लान्ट द्वारा बदला जा सकता है, हिप प्रोस्थेसिस के विभिन्न अंगों में एसीटेब्युलर कप (शेल), एसीटेबयुलर लाईनर, फिमोरल हेड ,फिमोरल स्टेम आते है। इस प्रकार की जाइंट रिप्लेसमेन्ट सर्जरी आर्थराईटिस के दर्द से मुक्त करके दिनचर्या के कार्यों में आसानी से करने की सुविधा प्राप्त कराती है।

...र को होने ...ताल टली

सेवानिवृत्त कर्मचारियों से संबंधित मुद्दों को सुलझाने, एनपीएस को समाप्त करने और उपभोक्ताओं के लिए सेवा शुल्क कम करने और अच्छा प्रदर्शन नहीं करने के नाम पर अधिकारियों को परेशान नहीं करने की मांग की थी.

ज्ञातव्य हो कि पिछले महीने वित्त मंत्री निर्मला सीतारमण ने बैंकों के विलय का ऐलान किया था. उन्होंने कहा था कि सरकारी क्षेत्र के 10 बैंकों का विलय करके 4 बैंक बनाये जाएंगे.

सरकार के इस फैसले का बैंकिंग सेक्टर के अलग अलग ट्रेड यूनियन विरोध कर रहे हैं. यूनियनों का कहना है कि इससे हजारों नौकरियां जाने के साथ ही नॉन परफॉर्मिंग असेट भी बढ़ेगा.

Keep an eye on your cardiovascular health during pandemic, says city based doctor

When lockdown was initiated, hospitals went through a tough time fighting the pandemic. Many patients ignored symptoms like discomfort in chest, shortness of breath, swelling in legs and headache. Patients have been avoiding hospitals due to fear of getting infected by coronavirus.

"Delay in the assessment of such symptoms can lead to massive heart attack (Coronary Heart Disease)", says Dr. Krunal Tamakuwala, senior Interventional Cardiologist, K.D. Hospital, Ahmedabad. To check for the blockage, the consultant will examine the patient, do an ECG and ECHO- cardiography to rule out Coronary Artery Disease (CAD). CAD results in narrowing of coronary arteries due to deposition of cholesterol, fat and platelets which leads to reduction in the blood flow to the heart. With the newer advances in coronary segment, it is advisable to use products like drug eluting stents (DES). It is also possible to optimize these stents by using coronary imaging techniques like Intravascular Ultrasound (IVUS) and Optical Coherence Tomography (OCT). Optimizing Percutaneous Coronary Intervention (PCI) results in a better outcome and also reduces the chance of repeat procedures. Radial access (Angiography through hand) can help to provide shorter stay in the hospital.

CAD can be prevented by making lifestyle changes like quitting smoking, regular exercise, reducing stress by choosing relaxation exercises like yoga, deep breathing exercises, listening to music, etc. "During this pandemic the duration of the doctor visit should be short, list of questions should be prepared well in advance. Wearing a mask, carrying a sanitiser and maintaining social distancing is crucial", advises Dr. Tamakuwala.

Dr Krunal Tamakuwala MD, DM, AFESC, FCCS
Senior Interventional Cardiologist, KD Hospital, Ahmedabad
Fellowship in complex coronary interventions from Japan and South Korea
Contact No : 9924052225

DELAY IN THE ASSESSMENT OF SUCH SYMPTOMS CAN LEAD TO MASSIVE HEART ATTACK (CAD)

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MUCORMYCOSIS: NEW MAYHEM

Introduction

Purpose of this article is to throw light on the recently emerging fungal infection named MUCORMYCOSIS. Dr Sapan Shah, (KD hospital), has observed some facts about infection from a mould from Mucorales family. This fungus is present everywhere in the ecosystem, atmosphere, soil etc. The mode of penetration in humans is usually through a nasal passage via inhalation and it could be dangerous if the fungus penetrates till sinuses. Although these fungal spores are present everywhere, it affects an individual when his/her immunity is suppressed or compromised, e.g. when the patient has low WBC count, HIV, cancer or on immunosuppression steroids. Steroids, which act as immunosuppressant, are given in advanced stage of the patient suffering from COVID-19. Patients with uncontrolled diabetes are also at high risk for developing a mucor infection.

Our Experience

"All the 29 patients who were treated recently have a similar medical history; that involves chronic diabetes, infection with COVID-19, steroid treatment, recovery from COVID-19 and then infection with mucor fungus." Dr Sapan Shah, KD Hospital

Sign and Symptoms

Mucor may show symptoms through different systems, e.g. ulcers (skin), seizures and paralysis (brain), proptosis (eyes) and rhino-orbito-cerebral mucormycosis - ROCM (sinuses). ROCM is the most common type seen in the patients who have recovered from COVID-19. Nasal obstruction, swelling in the eyes or cheeks, black dry crusts in the nose are the early symptoms of infection. In some cases, runny nose, headaches, obscured vision or bloody discharge from the nose were also observed.

Treatment

CT scan and endoscopy are the primary tools used as diagnostic investigations. If the patient is diagnosed positive, systemic antifungal medication and surgical debridement remain the treatment of choice. Commonly used antifungal to treat mucormycosis is Amphotericin B. Surgical intervention may also be required often to remove the fungal balls.

"I have done several surgeries to remove the eyes and if the entire process is not done promptly, it can turn fatal, too. It has a high morbidity and mortality rate if not treated in time. This infection ruins life physically, mentally and economically. Therapy can be as expensive as Rs. 25,000 to Rs. 50,000 a day and it may last several weeks to several months, on the top of the cost of surgery. My word is, if you consult the doctor by the right time, it would be easier to recover. "Dr Sapan Shah, KD Hospital

Precautions

"It is better to take certain precautions to avoid mucormycosis or black fungus infection. Since this fungus is everywhere around us, immunosuppressed patients should wear the mask and cover all the body parts as much as they can and consult with their doctors as early as possible. Importantly, mucormycosis is not contagious, it does not spread from person to person or from animal to person. The culprit is mucor fungus around us.

Patients with a medical history of diabetes, COVID-19 infection, steroid treatment, recovery from COVID-19 - should be vigilant and informed about MUCOR (black fungus). Consult your doctor if you suffer from any of the above symptoms." Dr Anuja Desai (Head of the Department, Ophthalmology, KD Hospital)

Dr Sapan Shah
M.S. Ophthalmology
Orbit, Oculoplasty & Ocular Oncology
KD Hospital

Dr Anuja Desai
M.S. Ophthalmology,
Cornea & Refractive Surgeon
KD Hospital

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૩ લાખથી વધુ ખર્ચની સામે માત્ર ૧.૪૫ લાખમાં ઓપરેશન કર્યાં

કે. ડી. હોસ્પિટલનો અનોખો વિક્રમ ૧૬ કલાકમાં ૨૭ બેરિયાટ્રિક સર્જરી

૧૭ મહિલા, ૯ પુરુષોની સર્જરી માટે ૩૦ ટીમના પુરુષાર્થથી સફળતા મળી

। અમદાવાદ ।

ગુજરાતમાં માત્ર ૧૬ કલાકમાં ૨૭ બેરિયાટ્રીક સર્જરી ઓપરેશન કેડી હોસ્પિટલ દ્વારા કરીને વિક્રમ સર્જાયો છે. કેડી હોસ્પટિલમાં ૬ઠ્ઠી મેના સાંજે છ વાગે ચાર ઓપરેશન થીયરેટરમાં હાથ ધર્યા હતા અને ૭મીને સવારે ૧૦ વાગે પુરા કરવામાં આવ્યા હતા. જેમાં હોસ્પિટલ દ્વારા બનાવવામાં આવેલ જુદી જુદી ૩૦ ટીમો ખડે પગે હાજર રહી હકી. જેમાંથી મોટાભાગના દર્દીઓને રજા આપી દેવામાં આવી છે. બેરિયાટ્રીક સર્જરી માટે દાખલ કરેલ ૧૭ મહિલા અને ૯ પુરુષો મળીને કુલ ૨૭ દર્દીઓને ત્રણ દિવસ સુધી એક સાથે રાખીને તપાસ કરવામાં આવી હતી. જેમાં ૧૫ દર્દીઓને આર.વાય.જી.બી. (રોકસ-એન-વાય-ગેસ્ટ્રીક બાયપાસ) અને ૧૩ ગેસ્ટ્રીક સ્લીવ્સ દર્દીઓ હતા. સામાન્ય રીતે બેરિયાટ્રીક સર્જરી ઓપરેશનનો રૂ.૩ લાખથી શરૂ થતા હોય છે, પરંન્તુ કે ડી હોસ્પિટલ દ્વારા એક દર્દીના ઓપરેશન રૂ.૧.૪૫ લાખમાં જ કર્યા હતા એટલે કે, ઓપરેશનમાં વપરાતી વસ્તુઓના ખર્ચના નાણાં લેવામાં આવ્યા હતા.

કે.ડી. હોસ્પિટલના ડાયરેકટર ડો. આદિત્ય દેસાઈ અને બેરિયાટ્રીક સર્જન ડો.મનીષ ખેતાને પત્રકારોને જણાવ્યુ હતુ કે, છેલ્લા ઘણા સમયથી ભારતમાં મેદસ્વીપણું વધી રહ્યુ છે. ઓબેસિટી-મેદસ્વીપણું માત્ર અતિશય ખાવાની આદતથી જ નહીં. પરંતુ હોર્મોનલ અસંતુલન, માનસિક સ્વાસ્થ્ય અસુંતલન અને આનુવંશિક પણ છે. મેદસ્વીપણું એ તેવા અંગો અવક્ષેપ, જીવનની સરળતા અને માનસિક સ્વાસ્થ્ય પર પ્રતિકૂળ અસર કરે છે. ઓપરેશન પછી તમામ દર્દીઓને તેમની ગતિશીલતા, હાયપરટેન્શન, ડાયાબિટીસ, માનસિક સ્વાસ્થ્ય અને તેમના યકૃતની તંદુરસ્તીના સંદર્ભમાં રાહત મળે છે. બેરિયાટ્રીક ઓપરેશનથી આડઅસર અંગે ડો. મનીષ ખેતાને જણાવ્યુ હતુ કે, આ પ્રકાનના ઓપરેશનથી કોઈ આડ અસર થતી નથી. અમેરિકામાં એક દિવસમાં ૩૦ જેટલા બેરિયાટ્રીક ઓપરેશન થતા હોય છે. અમારી ટીમ દ્વારા માત્ર ૧૬ કલાકમાં ૨૭ ઓપરેશન સફળતા પૂર્વક પુરા કરવામાં આવ્યા છે.

રાજકોટના જીગ્નેશનું વજન ૧૮૦ કિલો હતુ. જીગ્નેશે જણાવ્યુ હતુ કે, ઓપરેશન પહેલા મારુ અસહ્ય વજન હોવાથી રોજીંદી કામગીરીમાં તકલીફો થતી હતી, ઓપરેશન સારી રીતે થયુ છે. હાલ મને પ્રવાહી આપવામાં આવી રહ્યુ છે. હું મારુ રોજીંદ કામ હવે ધીમે ધીમે કરવાનું ચાલુ કર્યુ છે.

સ્લીલ ગેસ્ટ્રોકટોમી પ્રકિયા શુ ?

લેપ્રોસ્કોપિ અને અન્ય સાધનો માટે ડોકટર પેટમાં ૨ થી ૫ કડ કરે છે આશરે ૮૦-૮૫ ટકા હોજરી દૂર થાય અને બાકીના ભાગ સ્ટેપલ્સનો ઉપયોગ કરીને જોડી દેવામાં આવે છે. આ લાંબી ઉભી ટ્યુબ અથવા કેળાના આકાર જેવુ પેટ બનાવે છે.

૩૦ ટકા નીચા દરે ઉચ્ચ કક્ષાની સારવાર

કુસુમ ધીરજલાલ હોસ્પિટલ (કે.ડી.હોસ્પિટલ) ૩૦૦ પથારી ધરાવતી મલ્ટીસ્પેશિયાલ્ટી છે. જેની પેનલમાં ૪૦થી વધુ સુપર સ્પેશિયાલ્ટી ડૉક્ટર્સ સામેલ થયેલા છે. પોષણક્ષમ કિંમતે સમાજને ઉચ્ચ ગુણવત્તાવાળી તબીબી સારવાર ઉપલબ્ધ બને તે આ હોસ્પિટલનું ધ્યેય છે. સામાન્યપણે શહેરની અન્ય કોર્પોરેટ હોસ્પિટલની સરખામણીમાં કે ડી હોસ્પિટલમાં દર્દીઓને ૩૦ ટકા નીચી કિંમતે ઉચ્ચ કક્ષાની સારવાર મળી રહે તેવી વ્યવસ્થા કરી છે. આ માટે ૧૭ અતિ-આધુનિક સંપૂર્ણપણે સજ્જ ઓપરેશન થિયેટર્સ, પોષણક્ષમ કિંમતે ૭૫ પથારીના આઈસીયુ છે જેના માટે ખાસ ડેડિકેટેડ નર્સ અને ડૉક્ટર્સ પણ અલાયદા રાખવામાં આવ્યા છે. આ જ રીતે ઓપ્થલ્મોલોજી, જોઈન્ટ રિપ્લેસમેન્ટ અને કાર્ડિયોલોજી ડિપાર્ટમેન્ટમાં પણ દીર્ઘ અનુભવ ધરાવતા તબીબોની સેવા ઉપલબ્ધ બનાવાઈ છે. કે ડી હોસ્પિટલમાં હવે તમામ વિભાગો ધરાવતી ઓપીડી પણ કાર્યરત થયેલું છે.

India's tallest man needed new hip, city docs rose to occasion

Times News Network

Ahmedabad: His height is 8 sfeet and 1 inch, and he was in pain for six years. India's tallest man, Dharmendra Pratap Singh, needed an Ahmedabad hospital to stand on his own feet.

Singh belongs to Pratapgarh in Uttar Pradesh. After a car accident in 2013 and a botched-up surgery, he struggled to walk without support and the pain never left him. Then he learnt about Ahmedabad's KD Hospital through social media and approached it with his problem on August 23.

Two days later, Singh flew to Ahmedabad to undergo a bilateral hip replacement surgery at the hospital. After nearly a month of treatment and intensive physiotherapy, he is now able to walk with minimal support and pain.

Bilateral hip replacement surgeries account for 25% of the total joint replacement surgeries performed at the hospital every month. However, in the case of India's tallest man, complications arose from his height and health condition. Indeed, this was a rare case for the doctors.

"We had to perform the surgery in stages because Singh has osteoporosis, due to which his bones are extremely weak," said Dr Ateet Sharma, among the four orthopaedic surgeons who operated on Singh. "As a result, we had to use a bone graft for the hip implants to completely merge with the bones," Sharma said. "Each of his surgeries lasted for about three hours. A bilateral surgery typically lasts for 40 minutes."

Dr Hemang Ambani, another orthopaedic surgeon involved in the surgery, said: "We could not perform the surgery on both the hips at once because of his condition." Ambani said that anaesthesia had to be carefully regulated.

Singh used to work in the event management sector before the accident. He has not been able to get to work ever since. "I could not afford the surgery but the hospital has not charged me anything for the procedure and I could not be more grateful," he said. "The pain in my hips is almost gone and I will focus on recovering first."

Hospital authorities said that the minimum cost for bilateral hip replacement surgery is Rs 2.75 lakh.

Pic: TOI

SPECIAL ARRANGEMENTS: An 8 feet and 1 inch tall patient is not taken into account while designing hospital infrastructure. But the hospital did make special arrangements for Singh. These include...
- An assembled operation table
- Specially made bed
- Custom-made commode chair
- Crutches with longer extensions

KEY IMPLANTS

1. Hip replacement surgeries involve the use of prosthetic implants. Two key implants used include the femoral stem which facilitates weight bearing and an acetabular cup that forms the head of the hip joint.
2. The conventional size of a femoral stem required is 11-12mm. However, for Singh, it was 16mm on the right leg and 23mm on the left one
3. The usual size of an acetabular cup used in patients is 52-54mm. The one used in this surgery was 68mm on the right side and 70mm on the left
4. The hospital had to specially procure these implants as they are not easily available

WHY SO TALL?
Singh has a condition known as acromegaly, a hormonal disorder. As a result, his pituitary gland produces high amounts of growth hormone. The condition typically leads to the increase in the size of bones.

केडी अस्पताल द्वारा डायाबिटीज के बारे में जागृति फैलाने के लिए आउट ऑफ रन डायाबिटीज मेराथोन का आयोजन

अहमदाबाद (यंली)। अहमदाबाद में केडी अस्पताल द्वारा डायाबिटीज के बारे में जागृति फैलाने के लिए आउट ऑफ रन डायाबिटीज मेराथोन की जानकारी के लिए प्रेस कॉन्फरन्स का आयोजन किया गया। जिसमें डॉ. आदित देसाई, मैनेजिंग डायरेक्टर के.डी. अस्पताल पार्थ देसाई, सीईओ केडी अस्पताल श्री शांतनू गांगूली, सीएमओ केडी अस्पताल और मुख्य मेहमान के तौर पर राजीव गुप्ता, वीरसिंह चौहाण आदि उपस्थित थे। आज के समय में हर फैमिली में चार में से एक को डायाबिटीज है। समाज को तंदुरूस्त और स्वस्थ बनाने के लिए के.डी. अस्पताल द्वारा मैरोथोन का आयोजन किया गया है। के.डी. अस्पताल के मैनेजिंग डायरेक्टर ने कहा कि नवम्बर माह में समग्र विश्व में डायाबिटीज अवेरनेस मंथ के तौर पर मनाया जाता है गुजरात में भी १० नवम्बर में मेरोथोन का आयोजन किया गया है। इसमें ८ से १० हजार लोग जुड़ेंगे।

ભાસ્કર વિશેષ | પથારીવશ થઈ ગયેલા લખનઉના ધર્મેન્દ્રની અમદાવાદની હોસ્પિટલમાં સફળ સર્જરી થઈ

દેશના સૌથી ઊંચા પુરુષના થાપાનું પ્રત્યારોપણ

મારી ઊંચાઈ 8 ફૂટ 1 ઈંચ હોવાથી લખનઉમાં ડોક્ટરોએ ઓપરેશન કરવાની ના પાડી હતી

ફર્સ્ટ પર્સન
ધર્મેન્દ્ર પ્રતાપસિંહ

6 વર્ષ પહેલાં અકસ્માતમાં ડાબા થાપાનું ફ્રેક્ચર થયા બાદ પ્લેટ નાખવા અને કાઢવા માટે બે સર્જરી થઈ હતી. ધીમે ધીમે બંને થાપાનાં હાડકાંમાં તકલીફ વધતા ચાલવાનું ઓછું થયું અને પથારીમાંથી ઊઠી શકાતું નહોતું, જેથી લખનઉના સર્જને સર્જરી કરવાની ના પાડી હતી, પણ અમદાવાદની કે. ડી. હોસ્પિટલનાં સર્જનોની ટીમે વિશેષ પ્રકારનાં થાપાનાં સાંધા મગાવીને મારા બંને થાપાની નિ:શુલ્ક સર્જરી કરતાં હું ફરીથી ચાલતો થયો છું.' મને લખનઉમાં સર્જને સર્જરી કરવાની ના પાડી ત્યારે હું ભાંગી પડ્યો હતો, બીજી બાજુ મારી આર્થિક સ્થિતિ સારી ન હતી, જેથી મેં નેટ પર સર્ચ કરતાં અમદાવાદની કે. ડી. હોસ્પિટલમાં થાપાના નિષ્ણાત સર્જન ડો. અતીત શર્મા, ડો. અમીર સંઘવી, ડો. ચિરાગ પટેલ હોવાની માહિતી પ્રાપ્ત થઈ હતી. કે.ડી. હોસ્પિટલ તંત્રનો સંપર્ક કરતાં તેમણે તમામ મદદ કરવાની હા પાડીને સફળ નિ:શુલ્ક સર્જરી કરી છે. મારા ઘૂંટણનાં બંને સાંધા ખરાબ છે, તેની પણ હોસ્પિટલ દ્વારા સર્જરી કરાશે.

(સમીર રાજપૂત સાથે થયેલી વાતચીતના આધારે)

બેડ, ઓપરેશન ટેબલ અને ફિઝિયોથેરાપી માટે ખાસ વ્યવસ્થા

દર્દીની ઊંચાઈ 8 ફૂટ હોવાથી હોસ્પિટલમાં બેડ, ઓપરેશન ટેબલ, એનેસ્થેસિયા, ફિઝિયોથેરાપીની વ્યવસ્થા વધારવાની ચેલેન્જ હતી. દર્દીને ઓસ્ટિયોપોરોસીસ હોવાથી સર્જરીમાં વિશેષ તકેદારી જરૂરી હતી તેમ જ જમણી-ડાબી બાજુના એસિટાબ્યુલર કપ 52થી 54ને બદલે 68થી 70ના, જ્યારે ફેડરલ હેડ અને સ્ટેમની સાઈઝ 12થી 14ને બદલે 16ની સાઈઝના ઉપયોગમાં લેવાયા. ચેન્નઈથી આ તમામ પાર્ટ મગાવવા પડ્યા હતા. સામાન્ય વ્યક્તિની 35થી 40 મિનિટમાં થાય છે, પણ આ સર્જરી અઢી કલાકમાં પૂર્ણ થઈ હતી. દેશની સૌથી ઊંચી વ્યક્તિની બંને થાપાની સર્જરી નિ:શુલ્ક કરી છે અને હવે ઘૂંટણની સર્જરી પણ કરીશું. » ડો. અતીત શર્મા, જોઈન્ટ રિપ્લેસમેન્ટ સર્જન

ગ્રોથ હૉર્મોન્સ ડિસ્ટર્બ થતાં તકલીફ થઈ

દર્દીની અસામાન્ય ઊંચાઈ પાછળ એક્રેમેગલી હૉર્મોન્સ જવાબદાર હોય છે. આ એક પ્રકારનો ગ્રોથ હૉર્મોન્સ છે, જે ડિસ્ટર્બ થતાં વ્યક્તિની ઊંચાઈ અસામાન્ય રીતે વધે છે.

KD Marathon 10-11-2019

With more than 5,000 registrations from across India, a team of pacers and volunteers, the event had active participation from all the sectors of society, including young students, Home Guards, Police Department, Corporate Entities, Disabled people, and NGOs. The race results were declared with 60 cash prizes for winners ranging between Rs. 2,500 to Rs. 75,000.

Launch Event of KD Blossom

KD Blossom, a brain-child of KD Hospital, is available to offer a bouquet of services for Women and Children Care.

Scan the QR code to know more about it.

KD BLOSSOM
A Unit of KD Hospital

KD BLOSSOM

KD Blossom has been initiated as a clinical excellence programme of KD Hospital. It aims to provide the best gynaecology services, infertility services, full term 9 months care, foetal care, breast clinic, maternity and obstetrics services, neonatal and paediatric care, vaccination services, along with all diagnostic services, pathology lab, radiological services, physiotherapy services, and proper diet and nutrition counselling for the mother and child, all under one roof in a premium, state-of-the-art ambience.

This makes KD Blossom your one-stop destination for all mother and child care services.

Gynaecology

Breast Clinic

Obstetrics

High-Risk Pregnancy

Fertility Clinic

Foetal Medicine

Paediatrics

Neonatology

www.kdblossom.co.in

CMEs 2019-2020

CME Held on 01-01-2020 with Family Physicians of Bhavnagar


CME Held on 11-01-2020 with Gandhidham Delegates


CME Held on 17-11-2019 with Rajkot IMA Delegates


CME Held on 24-9-2019 with Patan IMA Delegates


A Unit of KD Hospital

NURSING CNE FEBRUARY 2020

The first-ever Nursing Conference was held on 01/02/2020 with the major focus on "To Empower and Lead All Nursing Personnel to Improve Quality of Care." The initiative was taken to upgrade the knowledge and skills of healthcare frontiers so that to take better care of the patients. The topics of the conference revolved around leadership, communications, ethical and legal practices, infection control practices, effective staffing management, and psychological aspects of patient care.













FACEBOOK LIVE SESSIONS

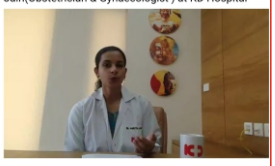
KD Hospital was live.
5 December at 12:30 ·

Talk about "Low AMH and Fertility" by Dr. Dipesh Sorathiya (MS, FIMIS) - KD Hospital

92 Likes · 6 comments · 9 shares

KD Hospital was live.
12 December at 16:17 ·

Know All About Contraception by Dr. Ankita Jain(Obstetrician & Gynaecologist) at KD Hospital



90 Likes · 5 comments · 1 share

KD Hospital was live.
9 November at 11:45 ·

Know More About Paediatric Surgery by Dr. Jayul Kamdar (MS,Mch-Paediatric Surgery)-KD Hospital

39 Likes · 2 comments · 3 shares

KD Hospital was live.
5 November at 11:45 ·

Diabetes & Peripheral Vascular Disease by Dr. Krunal Tamakuwala (MD, DM Interventional Cardiologist) at KD Hospital

66 Likes · 10 comments · 4 shares

KD Hospital was live.
30 October at 15:45 ·

Know More About Child Vaccination by Dr Vishwanath Shukla (Sr. Consultant Pediatrician) at KD Hospital

39 Likes · 3 comments · 3 shares

KD Hospital was live.
30 October at 11:49 ·

Feet, Foot care and Neuroarthropathy in diabetic population by Dr. Neeraj Bharti - MD, Fellowship in diabetes management & cardiology - KD Hospital

68 Likes · 16 comments · 12 shares

KD Hospital was live.
29 October at 10:50 ·

Stroke is an emergency : Every Minute counts(Dr. Samir Patel - Stroke Neurologist, Dr. Sandip Modh - Stroke intervention Specialist) KD Hospital

108 Likes · 23 comments · 25 shares

KD Hospital was live.
22 October at 11:49 ·

Lifestyle Modification in Diabetic Patients by Dr. Bhargavi Soneji - BPT,MPT in Rehabilitation (KD Hospital)

72 Likes · 8 comments · 9 shares

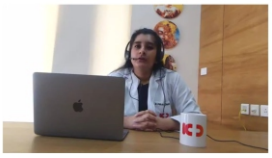
KD Hospital was live.
15 October at 11:46 ·

How to Prevent Complications of Diabetes by Dr Hiren Patt (DM Endocrinology) - KD Hospital

59 Likes · 14 comments · 13 shares

KD Hospital was live.
9 October at 15:45 ·

Mental Health During And After Pregnancy by Dr Pooja Chahwala (Psychiatrist) at KD Hospital



69 Likes · 2 comments · 2 shares

KD Hospital was live.
8 October at 11:58 ·

Diabetic Eye Disease by. Dr. Ruchi Vala (Vitreo Retinal Surgeon) - KD Hospital

126 Likes · 31 comments · 17 shares

KD Hospital was live.
3 October at 13:49 ·

Don't Suffer from Heavy Menstrual Bleeding by Dr. Nita Thakre (MD - Obs & Gynaec) - KD Hospital

55 Likes · 3 comments · 2 shares

KD Hospital was live.
29 September at 13:54 ·

"Healthy Heart Choice For Everyone Everywhere" by Dr. Bhavin Desai(MS, M.Ch, DNB Cardiothoracic Surgery) & Dr. Abhishek Rajpopat(MD, DM Cardiology)-KD Hospital

113 Likes · 17 comments · 15 shares

KD Hospital
22 September at 11:34 ·

Here's the full session with Gnanvatsal Swamiji from BAPS Swaminarayan Sanstha. Did you miss the session you wanted to attend? Sit back and relax while we have got it covered for you..

103 Likes · 4 comments

KD Hospital was live.
21 September at 15:48 ·

Nasal Allergy by Dr Hardik Shah, M.S. (E.N.T.) - KD Hospital

66 Likes · 2 comments · 4 shares

KD Hospital was live.
11 September at 15:54 ·

Mothers are always troubled about their newborns when they arrive. They are quite unsure of what is good for their newborn and what is not. By Dr. Snehal Patel (Consultant Pediatrician KD Hospital)

121 Likes · 9 comments · 9 shares

KD Hospital was live.
28 July at 15:45 ·

Let's Fight Hepatitis by Dr. Sushil Narang - MBBS, MD & DM Gastroenterology - KD Hospital

95 Likes · 15 comments · 20 shares

KD Hospital was live.
27 June at 15:45 ·

Water Borne Diseases by Dr Wasim Sachora - MD (Internal Medicine) at KD Hospital

180 Likes · 17 comments · 4 shares

KD Hospital was live.
27 May at 11:47 ·

Talking about "Strokes and Acute Kidney Injury during summer "by Dr Ruchir Divatia(Sr. Neurologist) and Dr Jay Patel(Nephrologist)

89 Likes · 5 comments · 2 shares

KD Hospital was live.
23 May at 11:45 ·

How to take care of your FITNESS AT HOME By Dr. Amir Sanghvi Sr. Orthopaedic Surgeon (KD Hospital) & a marathon runner himself, along with Mr. Lihas Trivedi ,Ultra Marathoner.

128 Likes · 16 comments · 1 share

KD Hospital was live.
15 May at 11:53 ·

"Urinary Tract Infection" by Dr Hardik Yadav, Urologist at KD Hospital

91 Likes · 13 comments · 1 share

KD Hospital was live.
13 May at 12:10 ·

Know all about "Primary Management of Injuries at Home" Dr Ateet Sharma, Senior Orthopaedic Surgeon-KD Hospital, and Dr Suhani Patel, Emergency Specialist-KD Hospital.

144 Likes · 19 comments · 8 shares

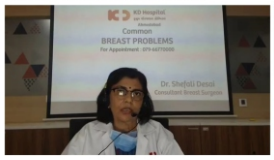
KD Hospital was live.
4 May at 11:45 ·

"Common Skin and Hair Problems" (Dr. Maitreyi Patel, Dermatologist KD Hospital
For Appointment : 079-66770000

162 Likes · 54 comments · 7 shares

KD Hospital was live.
2 May at 11:45 ·

"Common Breast Problems" (Dr Shefali Desai, Consultant Breast Surgeon KD Hospital)



68 Likes · 8 comments · 9 shares

FACEBOOK LIVE SESSIONS

KD Hospital was live.
1 May at 11:45 ·

"Understanding Arthritis of Knee Joint" (Dr Chirag Patel, Sr.Knee Replacement Surgeon -KD Hospital)

91 Likes · 7 comments · 6 shares

KD Hospital was live.
29 April at 11:45 ·

"Understanding Common Gastrointestinal Problems" (Dr Vismit Joshipura, Hepatobiliary (HPB) & Gastrointestinal (GI) surgeon - KD Hospital)

108 Likes · 12 comments · 9 shares

KD Hospital was live.
25 April at 11:46 ·

"Rheumatic Diseases and COVID 19" (Dr Dhiren Raval, Rheumatologist - KD Hospital)

137 Likes · 28 comments · 22 shares

KD Hospital was live.
24 April at 11:29 ·

Talking about why and how you should handle Emergencies during COVID 19 Pandemic (Dr Suhani Patel, Emergency Specialist KD Hospital)

260 Likes · 45 comments · 26 shares

KD Hospital was live.
23 April at 11:27 ·

" Understand more about chronic kidney diseases (Dr Jay Patel, Nephrologist KD Hospital)

116 Likes · 5 comments · 4 shares

KD Hospital was live — with **Sandip Modh**.
21 April at 11:36 ·

"Understanding Brain Hemorrhage" (Dr Sandip Modh, Senior Neurosurgeon KD Hospital)

229 Likes · 22 comments · 44 shares

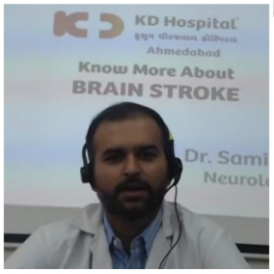
KD Hospital was live.
20 April at 11:25 ·

"Urinary leakage in Females" (Dr Nita Thakre, Urogynaecology specialist-KD Hospital)

97 Likes · 9 comments · 2 shares

KD Hospital was live.
15 April at 11:30 ·

"Know More About Brain Stroke"(Dr Samir Patel, Neurologist - KD Hospital)



120 Likes · 4 comments · 11 shares

KD Hospital was live.
14 April at 11:32 ·

How to Maintain YOUR WEIGHT During Lockdown (Dr. Manish Khaitan - KD Hospital)

99 Likes · 10 comments · 9 shares

KD Hospital was live — with **Bhavin Desai**.
13 April at 11:46 ·

Let's Understand BYPASS SURGERY (Dr. Bhavin Desai - KD Hospital)

166 Likes · 23 comments · 19 shares

KD Hospital
8 April at 15:05 ·

With nearly 25 years of clinical experience after MS in Orthopaedics, Dr Hemang Ambani, Senior Joint Replacement Surgeon at KD Hospital, is here to debunk all myths related to Knee replacement in the live webinar titled "Myths and Facts About Knee Replacement Surgery"

68 Likes

KD Hospital was live.
24 March at 14:39 ·

Our expert, Dr Jigar Mehta, welcomes your queries related to COVID-19 and its prevention...

203 Likes · 67 comments · 64 shares

A CSR INITIATIVE DURING THE LOCKDOWN

While the entire education centres were still in the phase of lockdown, KD Hospital initiated FB Live Sessions to reach out to students of Udgan School For Children, Superwings Preschool, Hiramani School, and Mother Teresa World School on educational sessions related to protecting children during the pandemic, temper tantrums, digital eye-straining, and mental health.

Dr Anuja Desai

Dr Krunal Patel

Dr Rinal Patel

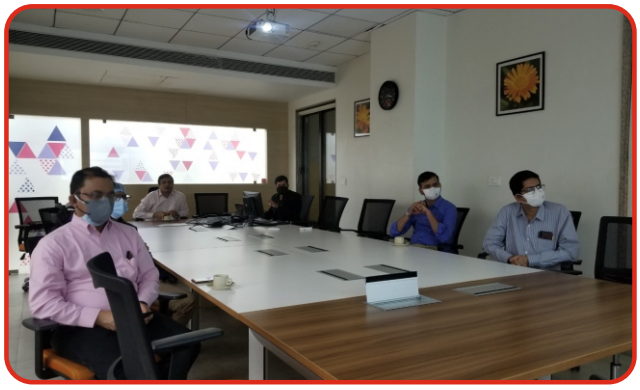
Dr Vishwanath Shukla

Awards Recognition

Dr Tushar Patel Received a Certificate of Honor for providing guidance in fighting COVID-19.

Dr Krunal Tamakuwala received a Certificate for Emerging Icon Of Gujarat of Honor for providing guidance in fighting COVID-19.

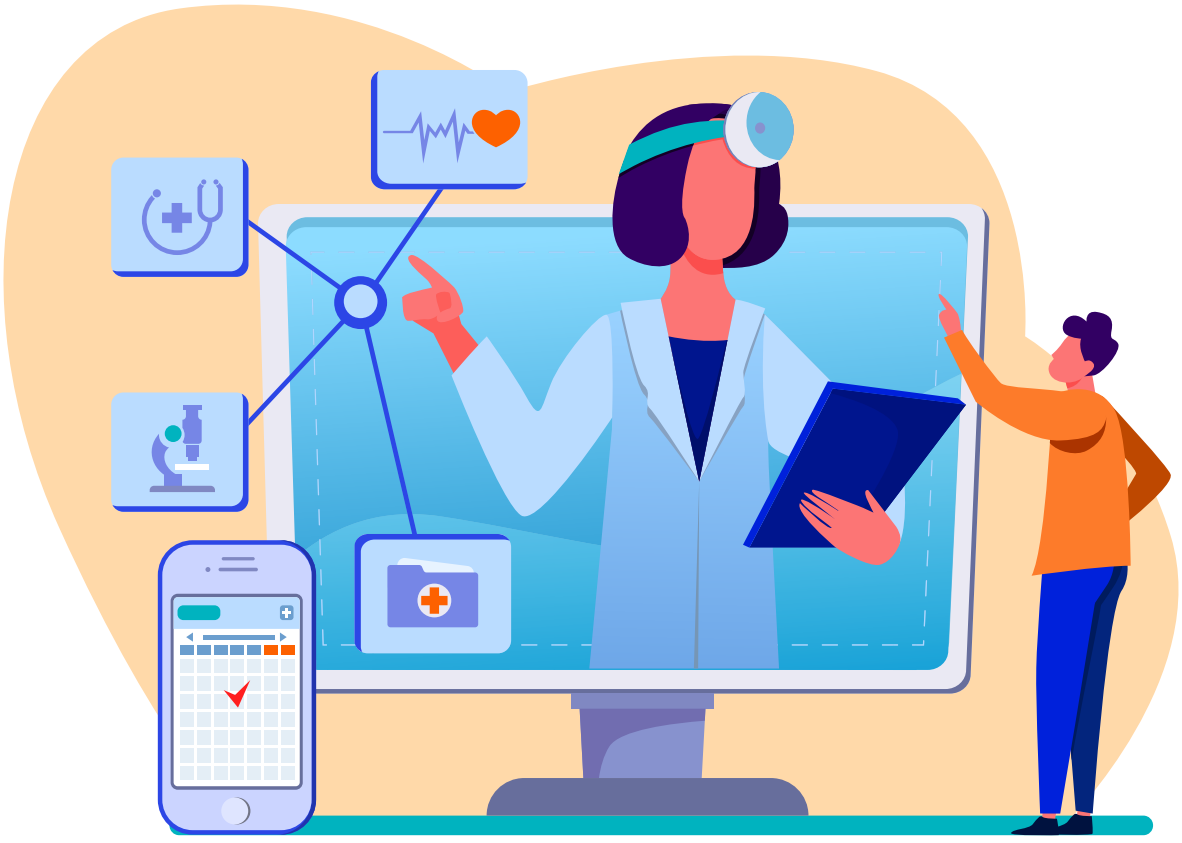
WSO Angels awards (Platimun Status) received by KD Hospital for constant efforts in providing points of improvement data for stroke prevention.



KD Konnect Telemedicine Services Available

KD Hospital
કુસુમ વીરજલાલ હોસ્પિટલ

STAY HOME & GET KONNECTED



To provide access to expert medical advice,
we have started

TELEMEDICINE CONSULTATION SERVICES

by Appointment Only

To Avail Our Services, Call - 079 66770000

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KD Academics

Courses Offered at KD Hospital

On-Campus Courses:

Approved by Gujarat University

- Line Care Management Course
- Infection Control Link Nurse
- Nursing Management in Neonatal Paediatric Patients
- Nursing Management in Gynaec Patients
- Wound Care Nurse
- Quality Assurance Nurse
- Critical Care, Emergency and Operation Theatre (CEO) Course

KD Hospital Internship Programs:

We have catered 260 interns in Departments of human resources, quality, operations, telecome, physiotherapy, radiology, dialysis, pathology, clinical pharmacology, clinical research, nursing, genral surgery and biomedical engineering over the past 2 years.

Paramedical Courses (Recognized by Gujarat University)

- Health Care Waste Management
- Operation Theatre Technology
- EEG Technology
- PFT Technology
- ECG, Echo & TMT Technology
- Audiology and Speech Therapy
- Medical & Phisician Assistant
- Medical Transcript
- X-ray / USG / CT Scan & MRI Technology

- Certificate Course in Medical Laboratory Technology
- Certificate Course in Dialysis Technology

- Post Graduate Certificate Programme in Cath Lab Technology
- Post Graduate Certificate Programme in Hospital & Health Care Management
- Post Graduate Certificate Programme in Food and Nutrition

Online Nursing Certificate Programs

(Certified By Australian Skills Quality Authority and Dubai Health Care Authority)

1. Cardiovascular Critical Care Nursing
2. Neurocysticercosis
3. Communication and Documentation for Health Professionals
4. Management Skills in Nursing
5. Wound Management
6. Basic Infection Control

We Are Honored to Have Them On Board

Dr Vishwanath Shukla
(MD Paediatrics)

Dr Abhishek Rajpopat
(MD, DM Cardiology)

Dr Bhavin Desai
(MS, MCh CVTS)

Dr Vismit Joshipura
(MS General Surgery)

Dr Amit Shah
(MS, MRCS)

Dr Kalpesh Sukhwani
(MD, DM Internal Medicine)

Dr Vivek Nanda
(DNB)

Dr Gitanjali Gupta
(MBBS, MRCEM, FACEE)

Dr Anshul Agarwal
(MD Pathology)

Dr Rutviz Mistry
(MD, DM Rheumatology)

Dr Jayul Kamdar
(MS, MCh Paediatric Surgery)

Dr Prakash Menghani
(DMRD)

Dr Hardik Shah
(MS ENT)

Dr Falguni Chudasama
(MS, FNERF)

Dr Neeraj Bharti
(MD Internal Medicine)

Dr Darshil Shah
(MS, MCh Urology)

Dr Gautam Parmar
(MS General Surgery)

Dr Sushil Narang
(MD, DM Gastroenterology)

KD INSTITUTE OF NURSING SCIENCES

KD Campus, Vaishnodevi circle, S.G. road, Ahmedabad - 382421

Admission Open for
BSc NURSING

Approved by Govt. of Gujarat Nursing Council

Eligibility Criteria | Science Stream

Salient Features

Attached to KD Multi Speciality Hospital

Smart Classrooms

Well Qualified & Experienced Faculty

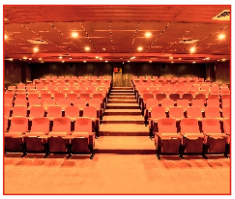
Wi-Fi Campus

Modern Labs

Education with Real-Time Practice

Eco Friendly Environment

Auditorium for Education Programs



Contact

079-66770200 / 079-66770201 / +91 6359603602 / +91 6359603653

● Website : www.kdhospital.co.in ● Email : nursingschool@kdhospital.co.in

SCOPE OF SERVICES

- Anaesthesiology
- Arthroscopy & Sports Medicine
- Audiometry
- Bariatric Surgery
- Blood Bank
- Cardiac Surgery
- Cardiology
- Clinical Nutrition
- Corneal Transplant
- Critical Care & Intensive Care
- Dentistry & Implantology
- Dermatology & Cosmetology
- Emergency Medicine
- E.N.T.
- Endocrinology & Diabetic Clinic
- Gastroenterology
- General Medicine
- General Surgery
- Gastro-Intestinal & Hepatobiliary Surgery
- Gynaecology & Obstetrics
- Immigrants Visa Health Checkup
- Infectious Diseases
- IVF & Birthing Centre
- Laboratory Medicine
- Medical Oncology & Chemotherapy
- Neonatology & Paediatrics
- Nephrology & Dialysis Centre
- Neurology & Stroke Centre
- Neurosurgery
- Ophthalmology
- Orthopaedics & Trauma
- Joint Replacement
- Pain Clinic
- Physiotherapy & Rehabilitation
- Plastic & Reconstructive Surgery
- Preventive Health Checkup
- Psychiatry
- Pulmonology
- Radiology
- Renal Transplant
- Rheumatology
- Sleep Medicine
- Spine Surgery
- Surgical Oncology
- Trauma Care
- Urology
- Vascular & Thoracic Surgery

Contact us :

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• ADMISSION	:	+91 79 6677 0004
• HEALTH CHECKUP	:	+91 79 6677 0005
• PATHOLOGY	:	+91 79 6677 0006
• RADIOLOGY	:	+91 79 6677 0007
• IMMIGRANTS VISA HEALTH CHECKUP	:	+91 79 6677 0077

contact@kdhospital.co.in

KD Hospital™

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कुसुम धीरजलाल हॉस्पिटल

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Emergency Specialists Available With Fully Equipped Emergency Department

Vaishnodevi Circle, S.G. Road, Ahmedabad - 382421

Editor : Dr Smruti Desai

Designer : Mr Ritesh Prajapati