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A Case Series of Emergency Hernial Repair: In COVID -19 Era

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ABSTRACT
The coronavirus disease pandemia created unedited challenges for surgical departments. Moreover it required a reorganization in surgical settings and plannings, because it can complicate the perioperative course with new challenges. In this case series, we retrospectively review the clinical details of 5 cases, who presented with COVID-19 and acute abdomen in emergency department in which 2 where incisional hernia,1 femoral,1 umblical and 1 inguinal hernia (Amyand hernia). None of the patients developed perioperative complications in the COVID-19 outbreak and they were operated on for emergency surgery. Hernias have a wide range of presentation. Mostly they are asymptomatic or may present with non-specific symptoms. But in some cases, the patients can have pain or nausea and, in some cases they can develop acute complications (incarceration, obstruction, volvulus and strangulation) that need prompt diagnosis and treatment. The effects on a new COVID-19 infection or exacerbation of current infection related to the anesthesia, the surgical stress and the perioperative medications are unknown.

INTRODUCTION

In December 2019, the outbreak of coronavirus disease (COVID-19) occurred in Wuhan City, Hubei province in China. The WHO declared it a Public Health Emergency of International Concern on 30th January 2020[1]. Clinical symptoms of presentation are fever (43,8%), dry cough (67,8%), dyspnea and other non-specific symptoms (diarrhea, fatigue, headache, vomiting, myalgia, abdominal pain even anosmia, hyposmia[2]. On the 20th April 2020 have been reported more than 2.44 million cases and 165,000 deaths worldwide. At least 54.3% of the infected are male and the median age was 56 years[3]. Many people were affected by a severe infection that consists in ARDS, acute kidney injury, septic shock and coagulation dysfunction. However, on the other hand, many cases resolved spontaneously. Hernia is abnormal protrusion of an organ or tissue through a defect in its surroundings walls[4]. Most of them can be asymptomatic, if they became symptomatic they can present with features of intestinal obstruction, incarceration or strangulation. Emergency surgery is required for an strangulated and obstructed hernia[5].

Aim and Objectives: The aim of this case series is to describe the clinical presentation and outcome of emergency surgical patient during the COVID-19 outbreak.

MATERIAL AND METHODS

Case 1: OBSTRUCTED FEMORAL HERNIA A 54 year old male presented with COVID-19 pneumonia to our emergency department with features of intestinal obstruction and swelling in right groin region, on cardiopulmonary comorbidities, obesity and diabetes. It is believed that surgical patients may examination per abdomen was soft, not distented, bowel sound-sluggish, tenderness present over lower quadrants and a swelling of size 8*4 cm present over right groin region, minimal warmth present, tenderness present, non-reducible. CECT abdomen shows right femoral hernia with distal ileal loop as its content causing proximal small bowel loop obstruction. He was posted for surgery. Intraoperatively ileum was herniating into

Fig. 1: Cect abdomen showing right femoral hernia with distal ileal loop as content

Fig 2: Gangerenous bowel segment of obstructed femoral hernia

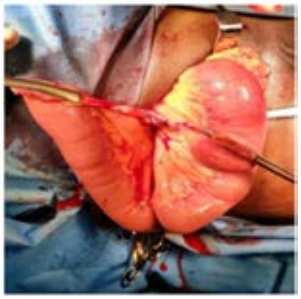

Fig 3: Resection of gangerenous bowel segment

Fig 4: Preop picture of obstructed incisional hernia

Fig 5: Act abdomen shows herniation of small bowel and mesentry

Fig 6: Intra op showing hernial sac

Fig7: Content -small intestine with mesentry

Fig 8: Preop picture of obstructed incisional hernia

Fig 9: Content-transverse colon, ileal loop, omentum

Fig 10: Usg abdomen shows umbillical hernia with strangulated fat

Fig 11: Gangerenous omentum

Fig 12: Content as appendix

femoral canal and 7-8 cm of ileum found gangerenous within it. Procedure done-REDUCTION OF FEMORAL HERNIA WITH RESECTION AND ANASTAMOSIS OF GANGRENOUS ILEAL SEGMENT DONE. Then femoral canal defect was repair with PDS sutures and figure of eight manner. Post operative period was uneventful. Respiratory exchanges remain good with no oxygen support. Three repeated checks of the nasopharyngeal swab were carried out negative. The patient was discharged on the fifteenth postoperative day.

Case 2: OBSTRUCTED INCISIONAL HERNIA 30 year old male patient presented with COVID-19 pneumonia to our emergency department with features of intestinal obstruction with history of open appendicectomy done 10 years, on examination per abdomen was soft, bowel sound was sluggish, post appendicectomy scar noted in RIF, a swelling of size 12*10cm present right lower abdomen, tenderness present, warmth present, non reducible. CT abdomen shows A defect of size 4.2cm in the anterior abdominal wall on right side with herniation of small bowel and mesentry-ileal loops dialated with multiple air fluid level. Excess sac was excised and posterior wall strengthening was done and as operating field was not contaminated with toxic fluid mesh was kept. Postoperative period was uneventful and Respiratory exchanges remain good with no oxygen support. Three repeated checks of the nasopharyngeal swab were carried out negative. The patient was discharged on the nineth postoperative.

Case 3: OBSTRUCTED INCISIONAL HERNIA A 79 year old female patient presented with COVID-19 pneumonia to our emergency department with features of intestinal obstruction, on examination per abdomen-soft, BS-sluggish and swelling of size 5*6cm in RIF region, cough impulse absent. H/o appendicetomy done. CT abdomen shows obstructed right ventral abdominal wall hernia. Patient was posted for EMERGENCY LAPORATOMY. Intra operatively there is a transverse defect of size 12 cm and sac identified and cut opened the above said contents were noted, contents were healthy partial omentectomy was done and content were reduced, defect closed. Posterior wall strengthening was done and as operating field was not contaminated with toxic fluid mesh was kept. Postoperative period was uneventful and Respiratory exchanges remain good with no oxygen support. Three repeated checks of the nasopharyngeal swab were carried out negative. The patient was discharged on the tenth postoperative day.

Case 4: OBSTRUCTED UMBILICAL HERNIA A 39 old female patient presented with COVID-19 pneumonia to our emergency department with features of intestinal obstruction, on examination per abdomen a swelling of size 3*4cm present over umbilical region, no cough impulse, irreducible, tenderness present over the swelling. USG ABDOMEN- Shows small umbilical hernia with strangulated fat. EMERGENCY REPAIR was done-Omentum was gangrened,gangrenous part was resected and content was reduced. Defect was closed.

- Postoperative period was uneventful and Respiratory exchanges remain good with no oxygen support. Three repeated checks of the nasopharyngeal swab were carried out negative. The patient was discharged on the twelth postoperative day

Case 5: INGUINAL HERNIA (AMYAND HERNIA) A 30 years old male presented with COVID-19 pneumonia to our emergency department with features of intestinal obstruction, on examination per abdomen a swelling of size 5*4cm present over right inguinal region, no cough impulse, irreducible, tenderness present over the swelling. EMERGENCY LAPAROTOMY was done Terminal ileal loop along with appendix was its content, content reduced and defect was closed. Postoperative period was uneventful and Respiratory exchanges remain good with no oxygen support. Three repeated checks of the nasopharyngeal swab were carried out negative. The patient was discharged on the nineth postoperative day.

RESULTS AND DISCUSSIONS

Anterior abdominal wall hernias may present with atypical signs of intestinal obstruction which may require emergency surgical intervention. Therefore, we should repair all hernias on an elective basis in any age group and never to be managed conservatively. Every effort should be made not to postpont surgical intervention if the patient is in life threatening situation, high risk patient, haemodynamic compromise or shock. Emergency surgeon must supervise the implementation of safety measures in the operating theatre. Hernias have a wide range of presentation. Mostly they are asymptomatic or may present with non-specific symptoms. But in some cases, the patients can have pain or nausea and, in some cases they can develop acute complications (incarceration, obstruction, volvulus and strangulation) where preoperative imaging may help in the diagnosis. Sometimes it can be an accidental finding intra operatively[6]. The effects of surgery, the stress from anesthesia, perioperative medications, occurrence of respiratory distress or lung atelectasis on predisposition to infection of new COVID-19 are not known. While the fatality of COVID-19 infection is believed to be between 1 and 3%, most of the deaths occurred in elderly patients with concomitant cardiopulmonary comorbidities, obesity and diabetes[7]. It is believed that surgical patients may have a higher fatality rate than those with more severe comorbidities[8]. In our cases no patients experienced any postoperative respiratory distress, both because of early intervention and the good pharmacological pain control which allowed an early mobilization of the patient.

CONCLUSION

Anterior abdominal wall hernias may present with atypical signs of intestinal obstruction which may require emergency surgical intervention. Therefore, we should repair all hernias on an elective basis in any age group and never to be managed conservatively especially in older patients. And COVID-19 pandemic has been a great challenge for surgical specialties, both in emergency and elective regimen. Every effort should be made to assess the feasibility of postponing surgical intervention until the patient is no longer potentially infectious or at risk for any perioperative complications. If an emergency surgical procedure is necessary (life threatening situation, high risk patient, haemodynamic compromise or shock), the emergency surgeon must supervise the implementation of safety measures in the operating theatre. Among laboratory confirmed cases of COVID-19, patients with any comorbidity yielded poorer clinical outcomes than those without, after surgery. The team performing emergency surgery in COVID-19 patients should minimise the risk of exposure to the virus by involving a minimal number of healthcare and the staff fully equipped with PPE.

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