Case Report

Acute Renal failure: A rare postoperative complication of giant inguinal hernia repair

Arshadullah Khan, Abu Bakar Hafeez Bhatti, Tufail Bawa

Abstract
Management of giant inguinal hernias is a challenge for surgeons. A middle age male presented to surgical OPD for management of a giant right sided irreducible inguinal hernia. After relevant pre operative workup, mesh repair was performed. Post operatively the patient developed acute renal failure. The patient was managed conservatively with few cycles of dialysis and fluid management. Thereafter the patient had a smooth recovery.

INTRODUCTION
Repair of inguinal hernia is a common surgical procedure1. The management of giant and neglected inguinal hernia is difficult due to distortion of anatomy and development of adhesions in the inguinal canal. A difficult dissection, possibility of orchidectomy and increased morbidity should be kept in mind3,4. Acute renal failure is a very rare complication of giant inguinal hernia repair. Here the authors report a case of 45 year old male who developed acute renal failure after giant inguinal hernia repair.

CASE PRESENTATION
A 45 years old male presented to outpatient clinic with a history of giant inguinal hernia for four years. It was 50 X40 cm in size, complete and irreducible, extending below to knee level as shown in figure 1. After the necessary preoperative work up, patient was put on the list for mesh repair. The repair was done under general anesthesia. Operative findings included direct and indirect hernial sacs. The indirect sac contained small bowel, large bowel and omentum as shown in figure 2. An omentectomy was performed and a major part of the sac was excised. The sac was closed with Vicryl 2.0. Plication of posterior wall was performed with Prolene 0. An orchidectomy was done to secure safe closure of the inguinal canal and then prolene mesh was applied. The patient was discharged on the 3rd postoperative day with normal post operative baselines. On the 5th postoperative day, the patient presented to the OPD with symptoms of uremia. His urea was 300 and creatinine was 8.6. The patient was re admitted and opinion from a nephrologist was sought for further evaluation. He was treated as case of acute renal failure secondary to acute tubular necrosis. He had strict input & output charting and had four dialysis sessions. The patient settled rapidly and was discharged after seven days.

DISCUSSION
The management of giant inguinal hernia is a challenging task. Due to the development of severe adhesions in long standing hernia, dissection during surgery becomes difficult. Comorbidities must be ruled out as they not only increase the risk of post operative complications but also the risk of recurrence due to local and systemic factors6,7. Complications of inguinal hernia repair include urinary retention, superficial wound hematoma, superficial wound infection, serous effusion, scrotal edema, recurrence and ischemic orchitis8,9. Acute tubular necrosis is a rare complication of giant inguinal hernia repair. There have been case reports where patients with giant hernia have developed renal failure due to herniation of urinary bladder into the defect. Wagner et al9 reported a case of huge inguinal hernia with acute renal failure due to herniation of urinary bladder causing bilateral hydronephrosis. Goonetilleke et al10 reported a case of giant inguinal hernia with acute renal failure secondary to obstructive uropathy.
Similarly, Pasquale reported a case of large inguinal hernia with acute renal failure and the reason was again due to obstructive uropathy secondary to bladder herniation. All these patients with giant inguinal hernia had acute renal failure preoperatively due to obstructive uropathy secondary to bladder herniation. In the present case, the patient developed renal failure postoperatively. The patient had a normal preoperative workup with normal cardiac, respiratory and renal functions and no other comorbid. The patient did not have any bladder herniation found intraoperatively. The likely explanation could be an increase in intra abdominal pressure leading to compromise of renal arterial flow secondary to reduction of large volume of abdominal contents back into the abdominal cavity. The patient needed four dialysis sessions and strict input and output monitoring before he recovered completely from the episode of acute renal failure. Here the authors have reported a very rare complication of inguinal hernia repair. During repair of large inguinal hernia, the volume of contents reduced back into abdominal cavity should be cautiously judged and possible monitoring of intra abdominal pressure done.

REFERENCES:


FIGURE 1: Giant inguinal hernia 50X40 cm in size

Figure 2: Sac containing omentum and large bowel