CASE REPORT

Blunt Abdominal Trauma with Pseudomyxoma Peritonei

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ABSTRACT

Trauma is a common cause of morbidity and mortality. Timely surgical intervention in a hemodynamically unstable patient can save life. This case reports an adult of 27 year age who sustained blunt abdominal injury. During evaluation and simultaneous management fast deteriorating circulatory status prompted exploratory laparotomy. A tributary of middle colic vein was the reason for blood loss which was ligated. Further inspection of the bowel revealed complete transection of the jejunum which was repaired. An interesting finding was an incidentaloma; a hard, fixed mass arising from the appendix region which was subsequently diagnosed as pseudomyxoma peritonei and right hemicolectomy was done at another elective surgery. The case highlights thorough inspection of abdominal cavity in all cases as unusual / rare pathologies may be discovered incidentally.

Key words Pseudomyxoma peritonei, Mucinous ascites, Incidentaloma, Hemicolectomy.

INTRODUCTION:

Pesudomyxoma peritonei (PMP) is a rare tumor, widely accepted to be originating from a ruptured tumor of the appendix. It is characterized by accumulation of large quantities of mucinous material in the peritoneum and hence also called 'jelly-belly'[1,2] This case report is being presented for diagnosing a rare incidentaloma per-operatively in a patient who underwent laparotomy for blunt abdominal trauma and presented with signs of peritonitis with hemorrhagic shock.

CASE REPORT:

A 27-year-old male presented with severe central abdominal pain following blunt injury to the abdomen, sustained in workplace, while pulling a fixed shaft with a chain. The shaft snapped resulting in blunt injury to patients' abdomen. On examination, airway was found patent but the patient was restless, anxious and in obvious pain. His C-spine was stabilized. He had tachypnoea, although saturation was maintained at 98% with O_2 being administered by mask. Bilateral air entry was normal. There was no clinical evidence of hemo- or pneumothorax. His pulse rate was 110/ min, weak and BP 110/70 mm of Hg. The tongue was pale and dry.

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The abdomen was distended with obvious fullness in the epigastrium. There was diffuse tenderness with rigidity suggestive of peritonitis. The bowel sounds were sluggish. External genitalia and hernial sites were normal. Spine, digital rectal examination and radiological workup were normal. Focused abdominal sonography for trauma (FAST) revealed free fluid in the peri-hepatic area.

Based on history, physical examination and radiological work-up, a working diagnosis of blunt abdominal trauma, with peritonitis and hemorrhagic shock (Class II initially) was made and a decision to operate was taken. High risk consent was obtained from the patient. During the course of resuscitation, patient complained of right shoulder pain in addition to worsening of the abdominal pain. Patient became extremely restless and sweat profusely with a respiratory rate of 30/ min. The vital signs further deteriorated with cold and clammy extremities, pulse was weak and thready about 120/min and BP fell to 90/70 mm of Hg.

An emergency exploratory laparotomy was performed under general anesthesia which revealed frank blood, clots and undigested food material in the peritoneal cavity. The source of bleeding was a tributary of middle colic vein which was clamped and ligated. (Fig-I) Inspection of the bowel revealed complete transection of the jejunum about one foot from the duodeno-jejunal flexure suggesting a class IV small bowel

injury. The injured and crushed ends of the jejunum were trimmed and freshened. A single layer end-to-end anastomosis was performed using 2-0 polygylcolic suture (Vicryl) and the corresponding mesenteric rent was closed. A thorough peritoneal wash was given.

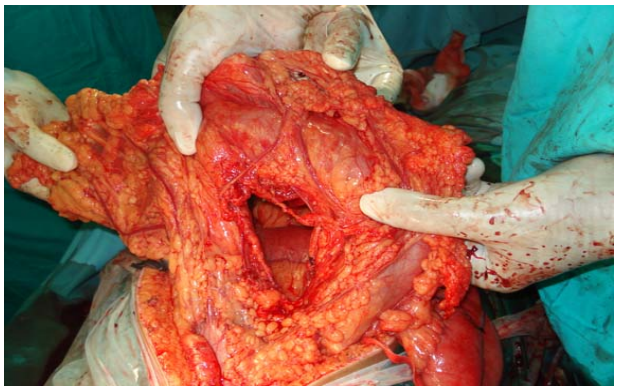

Figure-I: Tributary of middle colic vein ligated

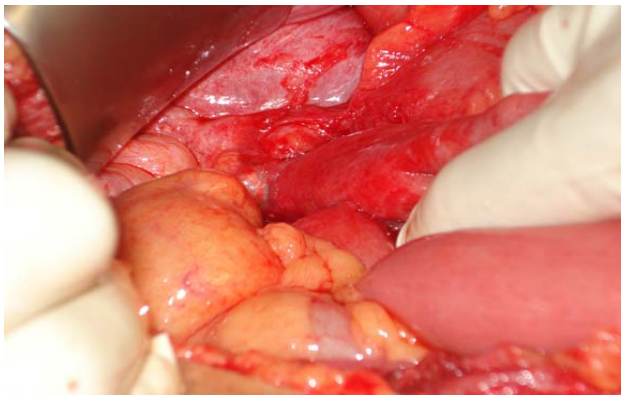

Figure -II. Hard, fixed mass in RIF

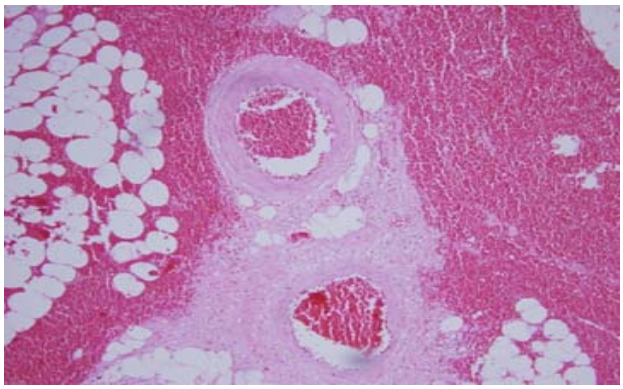

Figure-III: Mucinous cysadenoma of the appendix with unknown malignant potential

The entire abdomen was explored before closure, which incidentally revealed a hard, fixed mass arising from the appendix region (Fig-II). A biopsy of the mass was taken and no attempt made to mobilize and resect the lesion because of the unstable hemodynamic condition of the patient. Abdomen was closed in a single layer after inserting intra-peritoneal drains. Biopsy report of the mass revealed pseudomyxoma peritonei with polyp, without definite mucin producing epithelial tumor cells (FIg-III). Three months later, patient underwent a re-laparotomy and right hemicolectomy performed. The biopsy report showed mucinous cystadenoma of appendix with unknown malignant potential. Patient did remarkably well in the immediate post-operative period and also at 6 and 12 months follow-up.

DISCUSSION:

Rokitansky in 1842 was the first to describe the syndrome called pseudomyxoma pritonei which is characterized by ascites which is mucinous in nature and dissemination of mucinous tumor on peritoneal surfaces.[1,2] Appendix or ovary in females are the commonest sites of origin for this tumor, more so the former as evidenced by immunocytologic and molecular studies and it is invariably caused by neoplastic mucous-secreting cells within the peritoneum.[3,4] Tumor does not metastasize to solid organs via the lymphatic system or bloodstream; considered together with its non-aggressive nature. PMP syndrome should be considered a borderline malignancy. PMP is a relatively rare tumor and has an incidence of approximately 1 case per million of the population per year. It occurs two to three times more often in women than men, with a median age at diagnosis of 53 year.[5-7]

Gastrointestinal symptoms associated with PMP include vague abdominal pain, nausea and / or vomiting, early satiety and change in bowel habits. It may be many years before patients' have any symptoms from this type of malignancy. It is interesting to speculate that should this patient not have presented with a blunt abdominal trauma, the condition would have presented at a much later stage of the malignancy and may resulted in poor outcome. Thorough surgical debulking remains the mainstay of treatment for this condition. The new modality of treatment which has shown to improve survival for this condition is radical surgical debulking in combination with intraoperative heated intraperitoneal chemotherapy (HIPEC).[9]

The favorable outcome in this patient was due to prompt and aggressive surgical management after trauma. A thorough exploration of the abdomen led to the diagnosis of a rare incidentaloma - the pseudomyxoma peritonei, underscoring the importance of this step during any laparotomy.

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