

Laparoscopic Splenectomy

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Abstract

Spleen is the largest reticuloendothelial organ in the body consisting of an encapsulated mass of vascular and lymphoid tissue and responsible for defensive actions and hence the name defense organ for it. Like any other organ in the body it is also afflicted by a number of disorders among which are splenic cysts. Herein we report a case of large primary splenic cyst that was treated successfully by laparoscopic Splenectomy

Key Words

Spleen, Laparoscopic Splenectomy

Introduction

Spleen is the largest reticuloendothelial organ in the body consisting of an encapsulated mass of vascular and lymphoid tissue and responsible for defensive actions and hence the name defense organ for it. Like any other organ in the body it is also afflicted by a number of disorders among which are splenic cysts (1). Herein we report a case of large primary splenic cyst that was treated successfully by laparoscopic Splenectomy.

Case Report

A 45 years male with no previously significant medical and/or surgical history presented with chief complaints of pain left upper quadrant of abdomen for the last 3 years. It was deep dull aching in type and used to turn to a dragging type of sensation on prolonged standing. There was no history of trauma, fever, constipation, hematuria or dysuria. The patient was evaluated clinically and the data analyzed. His general physical examination was unremarkable, per abdomen examination revealed a smooth shaped mass in left hypochondrium, moving with respiration with inability to pass fingers between it and the costal margin.

His blood counts, kidney function tests, serum electrolytes, peripheral blood films were within normal limits. Chest radiograph depicted slight tenting of left hemidiaphragm, abdomen radiograph was normal. ECG revealed sinus rhythm. Ultrasound abdomen: - revealed a large splenic cyst 15.3X12 cms with a volume of 438ml,

homogenous, filled with fluid and absence of any calcifications or septations (*Fig 1*). CECT abdomen revealed a large splenic cyst occupying most of the organ, water density and absent calcifications or septations (*Fig 2*). Hydatid serology: - was negative. From all of the above data diagnosis of primary splenic cyst was made and the patient offered laparoscopic Splenectomy after he and his attendants were fully explained about the nature of laparoscopic surgery and a possibility of conversion to open in case it could not be completed laparoscopically and written consent was taken from the patient before surgery. The patient was initially positioned supine for intravenous access, the induction of general anesthesia, endotracheal intubation, bladder catheterization, and nasogastric tube placement. The patient was then positioned in a modified lateral decubitus position. Approximately 30 degrees of rotation of the chest and abdomen was used. Pneumoperitoneum was established by closed technique using veress needle periumbically and insufflating to an intra-abdominal pressure of 15 mmHg. The first trocar (10 mm) for the introduction of endocamera was placed periumbically through a horizontal skin incision. After inspection of abdominal cavity additional trocars were placed under direct vision; a 10 mm and two 5mm ports inserted in epigastrium, left and right upper quadrants respectively. Spleen was found to be enlarged and harbouring a very large cyst (*Fig 3*).

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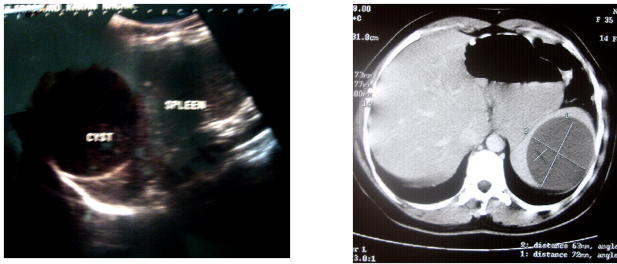


Fig 1 & 2. USG & CECT Abdomen Showing a Large Splenic Cyst

The splenic flexure of the colon was mobilized and retracted down and to the right and dividing the tissues between the colon and spleen. The posterior dissection of the spleen was continued by dividing the splenophrenic and splenorenal ligaments. Entry into the lesser sac was made by dividing the greater omentum between the stomach and spleen. Then the short gastric vessels were divided sequentially. Then the splenic hilum was carefully dissected and the splenic artery and vein identified, doubly clipped and divided (Fig 4-6). Complete hemostasis was ensured and a tube drain kept in splenic fossa. The specimen was retrieved in an endobag through a 5cm inguinal crease incision. The patient had an uneventful postoperative recovery. Nasogastric tube and Foley's catheter were removed after 24 hours, drain on 2nd postoperative day and the patient was discharged on 3rd postoperative day. The patient has been asymptomatic since then.

Discussion

Splenic cysts are rare lesions. The most common etiology for splenic cysts worldwide is parasitic infestation, particularly echinococcal. Symptomatic parasitic cysts are best treated with splenectomy, though selected cases may be amenable to percutaneous aspiration, instillation of protoscolicidal agent, and reaspiration. Nonparasitic cysts most commonly result from trauma and are called pseudocysts; however, dermoid, epidermoid, and epithelial cysts have been reported as well (1). Traditionally Splenectomy has been the treatment of choice for parasitic and symptomatic non-parasitic cysts. Splenic cysts have been classified by Martin et al. Type I cysts are true (Primary) cysts with a cellular lining of parasitic or non-parasitic origin. Type II cysts are false (secondary) cysts without a cellular lining, the most commonly found following blunt trauma to the spleen (2). The prevalence of splenic cysts has increased recently secondary to increased detection with CT scans and non-operative management of certain types of splenic trauma. Blunt trauma to the abdomen is the commonest cause of secondary cyst formation, responsible for 75% of

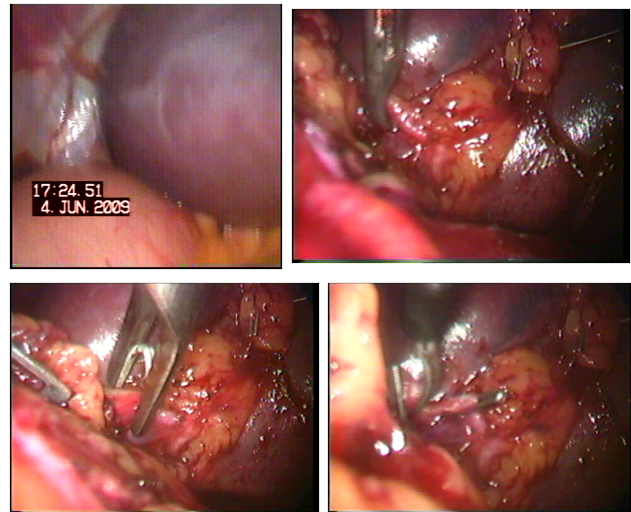


Fig 4-6. Intraoperative Pictures of Laproscopic Splenectomy

secondary splenic cysts (3). Splenic cysts may remain asymptomatic in 30 - 60% of patients (4). Indications for operative intervention include cysts with a diameter >5cm and those which are symptomatic. Cysts with a diameter of >5cms are more likely to rupture resulting in life threatening hemorrhage (5). Traditionally Splenectomy has been the treatment of choice for splenic cysts (6). It can be done both open as well laparoscopically. Laparoscopic Splenectomy is preferred over open as the latter offers all advantages of minimal access surgery (7).

Conclusion

Laparoscopic Splenectomy is a safe and effective procedure and offers all advantages of minimal access surgery.

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