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A Giant Pseudocyst of Spleen Presenting as Acute Intestinal Obstruction – A Forgotten Past Event. : - A Case Report with Review of Literature.

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ABSTRACT :- Splenic cysts as a differential diagnosis of abdominal lump presenting as a emergency, are rarely encountered in clinical practice. A young 14 year female presented with a giant cyst of spleen whereby all measures to conserve spleen were planned but despite best surgical operative efforts it was not feasible. Past episode of trauma to abdomen four months ago, well forgotten and stayed uneventful for four months, finally to land up in surgical emergency with acute obstruction. A surgical enigma??

RUNNING TITLE – Pseudocyst of Spleen.
KEYWORDS - Splenic Cysts, Obstruction, Abdominal Lump.

I. INTRODUCTION :-

Splenic cysts are classified as - primary cysts having well defined epithelial cellular lining usually due to congenital anomaly or parasitic infestation (75%) and secondary cysts as pseudocysts which are devoid of any cell lining. Secondary cysts are of hemorrhagic, serous, inflammatory or degenerative in origin. Since a decade, emphasis is laid in spleen conservation to avoid short and long term complications specially in children.[1] Though attempt should always invariably be made to conserve spleen in cases of splenic cysts but at times it is not feasible despite all efforts for partial splenectomy.[2] Spleen undergoes cystic changes less often than any other abdominal viscera.[3] Splenic cysts are rare. Pseudocysts most often follow a blunt trauma.[3,4,5] Pseudocysts of spleen are very rarely encountered with incidence of less than 1% of all splenectomies performed.

II. CASE REPORT:-

A young 14 year female patient presented with history of left upper intra-abdominal mass since four months, gradually progressing in size occupying almost whole abdomen. There was history of blunt trauma to abdomen four months back. Minor trivial trauma of fall and hit by corner of table at home cured by home remedies was forgotten as the child had no problem with routine daily activities initially. Her complaints at the time of admission in causality department were abdominal lump with nausea, vomiting, loss of appetite and features of acute intestinal obstruction, off and on, for last fortnight which relieved spontaneously all by itself. Ultrasound report of the patient showed, 15.6 x 15.2 cm large cystic swelling with internal echoes seen in spleen causing mass effect on pancreas and left lobe of liver.

CECT revealed a single large cystic lesion of 17 x 13.5 x 13cm in size arising from spleen. Superior extent of the mass encroaching infra-diaphragmatic surface, inferiorly - displacing left kidney anteriorly and inferiorly. Stomach and duodenum were pushed anteriorly towards right side (Fig. 1.).

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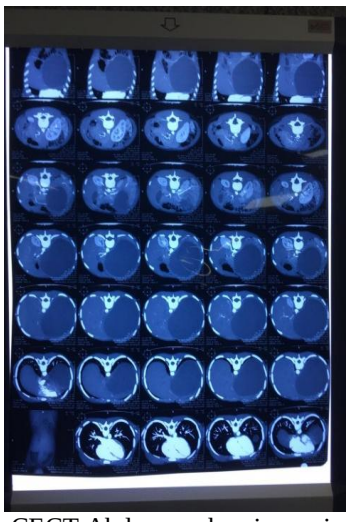

(Fig. 1.)- CECT Abdomen showing a single large cystic lesion arising from spleen.

Operative Procedure - After explaining risk of surgery and anesthesia and post operative morbidity, consent for exploratory laparotomy was taken. Midline incision approach was decided taking into consideration of the size of the lump. On approaching peritoneal cavity no free fluid was encountered. A huge cyst (Fig.2) containing approximately three liters of clear fluid was noted. The cystic lump was arising from spleen involving the hilum, displacing the stomach medially and pancreas anteriorly. Thick fibrous adhesions between the cyst and diaphragm, stomach, left lobe of liver were encountered which contributed to the enormous difficulty encountered in delivering the spleen outside. After evacuating the cyst, the spleen was papery thin with no parenchymal tissue. The splenic hilum was a mere bunch of blood vessels attached to the pseudocyst arising from spleen. (Fig.3). Since no parenchymal tissue was left in the remnant spleen and potential danger of further acting as nidus with infective focus, the decision was taken by operative surgical team to proceed for splenectomy. (Fig.4). Hence splenectomy was performed.

(Fig.2) - Midline incision showing the large cystic lump.

(Fig.3) Cyst drained (clear fluid) and Opened.

(Fig. 4) - Spleen and Cyst Mobilised.
(Internal View).

Post-operatively, the patient resumed oral diet on day two, hospital stay was uneventful thereafter and she was discharged after five days. Scheduled vaccines for infection prophylaxis were administered in post operative period along with cephalosporin prophylaxis. Patient was asymptomatic on six months follow up with normal appetite and daily physical activities. Histopathology report was a confirmed, Type II false cyst or pseudocyst (secondary cyst) arising from spleen without cellular lining. Spleen with cyst of size 10 x 7 x 6 cm, cyst measures 8 x 6 x 5 cm.

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III. DISCUSSION-

According to their etiology splenic cysts are of two types – parasitic and non-parasitic. Non parasitic cysts can be true or false according to presence of surface epithelium. Pathogenesis of true cyst is not entirely clarified. However blunt abdominal trauma is the commonest cause of pseudocyst of spleen; usually form after organized hematoma[4,6].

Martin classified splenic cysts as follows:
- Type 1 cysts are primary cysts with a cellular lining, either parasitic or non parasitic in nature. Non parasitic Type 1 cysts are either congenital or neoplastic.
- Type 2 cysts are secondary without cellular lining.[7]

Most of the splenic pseudocysts (30-60%) are asymptomatic.[2,4,7] A large splenic cyst has clinical presentation as abdominal pain, nausea and vomiting due to compression of stomach[4,8,9]. Complications of pseudocyst include rupture, hemorrhage and infection[3,4,9]. Earlier, splenectomy was the preferred treatment modality but recently spleen preservation approach is preferred. The understanding of splenic anatomy and splenic function with increasing knowledge about overwhelming post splenectomy infections (OPSI) and other post splenectomy complications resulted in organ sparing approach[4,6,10]

In another review: six cases of splenic pseudocysts were found over a six year period. One splenic pseudocyst spontaneously resolved. A second splenic cyst was removed by open splenectomy. The remaining 4patients were all first treated with percutaneous drainage. However, 3 of the 4 cysts recurred. 2 of these 3 recurrent cysts were treated with laparoscopic fenestration, and all subsequently recurred; 1 of these patients later developed a splenic abscess. The third patient had a repeat percutaneous drain with subsequent recurrence. The last patient died of sepsis secondary to an iatrogenic punctured colon. It concluded that percutaneous drainage and laparoscopic fenestration have an unacceptably high rate of failure. Partial or complete splenectomy should be considered for young and otherwise healthy patients who have large symptomatic splenic pseudocysts.[6]

In another report, it mentions that the medical history of patients with splenic pseudocysts does not always reveal the cause of the pseudocyst formation. Any type of spleen-sparing procedure is not easy to perform in cases of surgical and anatomical difficulty, because of recurrence and the risk of intractable bleeding from the spleen. And it concluded that - partial splenectomy is the recommended method for parenchymal preservation, but total splenectomy is preferred when the splenic cyst is oversized or cannot be excised with safety.[11]

McColl et al established laparoscopic marsupialization of the cysts, with cavity filled up with omentum as surgical omentopexy which prevents recurrence of splenic cyst in future.[12]

One report mentions the advantages of laparoscopy with caution that conversion to an open procedure may be required when dense adhesions are encountered or the cyst is located deep within the splenic parenchyma. In a review of 19 laparoscopic surgeries, the most common type of cyst was a pseudocyst; conversion to open surgery was necessary in 9.5% cases.[13]

In another review comparing laparoscopic with open surgery, the laparoscopic management of splenic cysts has all of the advantages seen with other forms of laparoscopic surgery. Fortunately, splenic cysts are seen infrequently, and it is therefore unlikely that a randomized controlled study comparing open with laparoscopic surgical techniques could be performed. However, based on the many case reports published to date, laparoscopic splenic cyst fenestration appears to be a safe and effective treatment for uncomplicated non-parasitic splenic cysts and concluded that open partial splenectomy and laparoscopic cyst wall unroofing are both effective tools in the management of splenic non-parasitic cysts.[14]

Our case report of a giant pseudocyst in a 14 years old, presenting with recurrent abdominal pain and intestinal obstruction, suggestive of adhesions with very little splenic tissue seen on imaging and per-operative findings of large sinusoids , we feel our decision to perform open splenectomy was justified.

IV. CONCLUSION:-

Splenic pseudocyst must be suspected in patients with a history of abdominal trauma and presence of cystic lesion in spleen. However definitive diagnosis is based on histopathological examination where absence of epithelial lining is confirmative. For large splenic cyst involving the hilum with no remaining splenic parenchyma, total splenectomy may be the only option. However splenic preservation should be done if possible. Laparoscopy has evolved with all its benefits but the decision to do the procedure by laparoscopy in such a case may be best left to the operating surgeon.

REFERENCES

[1]. Tosato F, Passaro U, Vasapolo LL, Folliero G, Paolini A. Subcapsular Splenic Haematoma Due To Infectious Mononucleosis. Rev Eur Sci Med Farmacol. 1995; 17: 157-9.
[2]. Brown MF, Roos AJ, Bichop HQ, Schnaufer L, Ziegler MM, George W. Partial Splenectomy -The Preferred Alternative For The Treatment Of Splenic Cysts. J Paediatr Surg.1984; 19:56-8.
[3]. Davis C E, Montero J M, Vanhorn C N. Large Splenic Cysts. Ann Surg.1971; 173 (5):686-92. doi: 10.1097/00000658-197105000-00008.
[4]. Geraghty M, Khan I Z, Conlon K C. Large Primary Splenic Cyst: A Laparoscopic Technique. J Minim Access Surg. 2009; 5(1):14-16.
[5]. Mehmet Gamsizkan, Ayhan Özcan, Nail Ersöz, İ. Hakkı Özerhan, Zafer Kılbaş, Sadettin Çetiner. Pseudocyst of Spleen: A Case Report. Gulhane Med J. 2009; 51(4):262-264.
[6]. Wu H M, Kortbeek J B. Management of Splenic Pseudocysts Following Trauma: A Retrospective Case Series. Am J Surg.2006; 191(5) 631-4.
[7]. Martin JW. Congenital Splenic Cysts. Am J Surg.1958; 96:302-8.
[8]. Islam N. Splenic Cysts. Postgrad Med J.1965; 41(473): 139-142.
[9]. Freiwald S. Late Presenting Complications after Splenic Trauma. Perm J.2010 Summer; 14 (2) 41-44.
[10]. Kalinova K. Giant Pseudocyst Of The Spleen: A Case Report And Review Of Literature. J Indian Assoc Pediatrics Surg. 2005; 10(3) 176-178.
[11]. George Galyfos, Zisis Touloumis, Konstantinos Palogos, Konstantinos Stergios, Maria Chalasti, Nikolaos Kavouras, Laurant Lavant. Oversized Pseudocysts of the Spleen: Report Of Two Cases: Optimal Management of Oversized Pseudocysts of the Spleen. Int J Surg Case Rep.2014; 5(2):104-7.
[12]. Ryan J McColl , David J Hochman, Clifford Sample. Laparoscopic Management of Splenic Cysts: Marsupialization, Cavity Lining With Surgicel and Omentopexy to Prevent Recurrence. Surg Laparosc Endosc Percutan Tech. 2007 ; 17 (5):455-8.
[13]. Jeffrey B. Comitalo, Laparoscopic Treatment of Splenic Cysts. JSLS. 2001; 5(4): 313–316.
[14]. Gianom D. , Wildisen A. , Hotz T., Goti F. Decurtins M. Open and Laparoscopic Treatment of Non-parasitic Splenic Cysts. Dig Surg 2003; 20:74–78.