DOI: 10.7860/JCDR/2022/52733.16265

Case Report

Obstetrics and Gynaecology Section

Pedunculated Intraperitoneal Lipoma Presenting as Ovarian Torsion: A Case Report

VIJAYALAKSHMI KANDASAMY[1], J JENNIFER BRITTO[2], S RENUKA[3], PRIYA MURUGAN[4]

ABSTRACT

Lipoma is a very common (prevalence 39%) benign soft tissue tumour that is composed of mature fat. Lipomas, though common on external surface of body, also have been reported in mediastinum, chest wall, thorax, retroperitoneal areas and pelvis. In Gastrointestinal Tract (GIT), lipomas are mainly found in the submucosa and subserosa of the small and large intestine. An eight-year-old female child presented with a feature suggesting torsion of the dermoid ovarian cyst. The clinical features included sudden abdominal pain, vomiting and other symptoms suggesting a differential diagnosis of appendicitis or an ovarian cause. Serum markers for carcinoma were normal. The Contrast Enhanced Computed Tomography (CECT) showed a right iliac fossa fat density with few internal septations and Magnetic Resonance Imaging (MRI) confirmed the torsion of the pedunculated mass and histopathological examination showed the mass as lipoma. The site of the lipoma, presented in this case, is rare. Though the presentation of intraperitoneal lipoma is rare, this should be considered as differentials in young patients presenting with features of ovarian torsion. The presentation of intraperitoneal lipoma especially in young patient is rare which is mostly an incidental finding in a laparotomy and mostly present as a case of obstruction or abdominal pain.

Keywords: Abdominal fat, Fat dense lesion, Intraperitoneal mass, Ovarian neoplasm

CASE REPORT

An eight-year-old female child presented to the Department of Obstetrics and Gynaecology with complaints of sudden onset of abdominal pain since three days. The pain was diffuse present in all the quadrants of abdomen, dull aching, continuous and there were no aggravating or relieving factors. The pain was not associated with symptoms such as vomiting, constipation, dysuria, cough and breathlessness. No similar illness in the past was reported. The patient takes mixed diet. No family history was reported. No drug intake or surgical history was reported.

On examination, the general condition was fair, afebrile and no pallor or pedal oedema was observed. Rebound tenderness was present. The blood investigations were total leucocyte counts was 8200 cells/mm^3, neutrophils were 66.8%, eosinophils-1.2%, basophils were 0.6%, lymphocytes 0-23.3% and monocytes were 8.1%, platelets-3.56 lacs per cu.mm. Haemogram was Packed Cell Volume (PCV) was 32.4%, Mean Corpuscular Volume (MCV)-83 fL, Mean Corpuscular Haemoglobin (MCH) was 28.3 pg, Mean Corpuscular Haemoglobin Concentration (MCHC)-34.2 gm/dL and Red Cell Distribution Width (RDW)-13.1 fL and urine routine test was normal. The Lactate Dehyrogenase (LDH) values-295 U/L, beta Human Chorionic Gonadotropin (hCG)-0.41 mIU/mL, Alpha Fetoprotein (AFP)-2.22 ng/mL, Cancer Antigen (CA)-125- 13.2 U/mL and Carcinoembryonic Antigen (CEA) -0.62 ng/mL.

The CECT abdomen was done because of suspected subacute appendicitis which showed a fat density lesion measuring 50×32×45 mm in the right iliac fossa, adnexa with few internal septations. Inflammation was noted within and adjacent to the lesion [Table/Fig-1]. The MRI screening showed features suggestive of torsion of the pedicle. Differential diagnosis of abdominal mass such as appendicular mass, ovarian mass such as dermoid cyst were considered before the surgical procedure. Surgery was planned and intraoperative findings suggested an anterior abdominal wall mass and both ovaries and fallopian tubes were found to be normal [Table/Fig-2]. Histopathological examination report showed an encapsulated lesion composed of fat necrosis and septa shows inflammatory infiltration, giant cells, granulation tissue, myxoid degeneration fibrosis and congested blood vessels [Table/Fig-3]. Thus, a final diagnosis of pedunculated intraperitoneal lipoma was derived with the help of histopathological diagnosis. The patient was tolerating well and recovered from the surgical intervention and was discharged as per the protocol. A follow-up visit was suggested after two weeks, six weeks and 12 weeks and the patient was healthy during these visits.

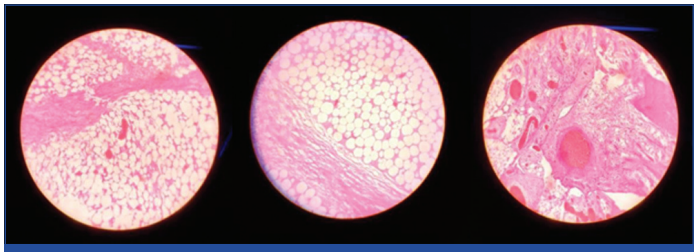
[Table/Fig-1]: Pedunculated lipoma gross appearance.

DISCUSSION

The space beneath the peritoneum is very complex as it contains solid organs and hollow viscera, lymphatics and lymph nodes, vascular structures and stromal tissues. This complex space serves as an origin for various neoplastic and non neoplastic lesions which arises as a soft tissue mass [1].

One of the extremely rare tumours arising intraperitoneally is lipoma [2]. Lipomas are small benign tumours of mesenchymal origin that contain mature fatty tissue and are enclosed by a fibrous capsule.

[Table/Fig-2]: Computed Tomography (CT) scan image showing an interior abdominal wall mass (red highlighted circle).



[Table/Fig-3]: Histopathological images showing inflammatory infiltration, giant cells, granulation tissue, myxoid degeneration fibrosis and congested blood vessels (H&E). 10X magnification

These tumours are usually asymptomatic however when the mass enlarges and disturbs the structures nearby, it can cause pain or distension like this case [3]. In an ultrasound examination, it appears as a well encapsulated, echogenic mass with good sound transmission. But the signs and symptoms of omental torsion seen at first physical examination mimicked those of acute appendicitis [3].

Very few studies have been reported in the past with similar presentation of intraperitoneal pedunculated lipoma mimicking either appendicitis or ovarian torsion [2-4]. The presentation of the present case was comparable to one of the previous cases reported by Barut I et al., which was a lipoma of the parietal peritoneum at laparotomy [2]. The torsion of lipomas arising from omentum, mesentery and epiploic appendices have been reported in the literature.

Lipoma associated with omental torsion can be diagnosed with the help of CT scan [3]. Surgical resection is the mainstay of treatment for intraperitoneal lipoma. A pathological examination is required for a definite diagnosis [5]. Microscopically, they are encapsulated mass of mature adipocytes separated by fibrous septa. The recurrence rate of all lipomas is less than 5% and is usually due to incomplete excision [2].

Although rare, lipomas should be considered in the differential diagnosis of paediatric abdominal or pelvic fatty masses with or without abdominal pain. Coronal and sagittal reconstructions could help in the evaluation of abdomino-pelvic masses on CT scan and hence should be always performed preoperatively. The role of the radiologist is also very crucial in differentiating lesions that may require surgery.

Intra-abdominal lipomas that arise from omentium, mesentry and other locations have been reported in literature as causes of abdominal pain [6-10]. Though the main differential diagnosis of acute appendicitis could be excluded by CT, exploratory laparoscopy is the gold standard in the diagnosis of tort intraperitoneal lipoma. In addition, the operating surgeon should examine the peritoneal wall and the appearance of the appendix to exclude the diagnosis of acute appendicitis.

In this case, all the imaging investigations were done with surgical removal and histopathological examination was done. An imaging study helped arrive at the diagnosis. Certainly, the diagnosis could be missed if no imaging facilities are available in resource-limited settings.

CONCLUSION(S)

Any mass in a young prepubertal girl warrants thorough preoperative evaluations as malignancy is a possibility. A high degree of clinical suspicion is required for working up such cases. Though the presentation of intraperitoneal lipoma is rare, this should be considered as differentials in young patients presenting with features of ovarian torsion. Thus the possibility of intraperitoneal lipoma in young adults cannot be ignored.

REFERENCES

[1] Shaaban A, Rezvani M, Tubay M, Elsayes K, Woodward P, Menias C. Fat-containing retroperitoneal lesions: Imaging characteristics, localization, and differential diagnosis. RadioGraphics. 2016;36(3):710-34.
[2] Barut I, Tarhan O, Ciris M, Tasliyar E. Lipoma of the parietal peritoneum: An unusual cause of abdominal pain. Annals of Saudi Medicine. 2006;26(5):388-90.
[3] Kinjo Y, Adachi Y, Seki K, Tsubono M. Laparoscopic resection for torsion of an omental lipoma presenting as an acute abdomen in a 5-year-old girl. Journal of Surgical Case Reports. 2014;2014(7):rju072-rju072.
[4] Bunker DL, Ilie VG, Halder TK. Torsion of an abdominal-wall pedunculated lipoma: A rare differential diagnosis for right iliac fossa pain. Case Rep Surg. 2013;2013:587380.
[5] Hashizume N, Aiko T, Fukahori S, Ishii S, Saikusa N, Koga Y, et al. Benign mesenteric lipomatous tumour in a child: A case report and literature review. Sur Case Rep. 2020;6(1):243.
[6] Farmlett EJ, Fishman EK, Jones B, Siegelman SS. Case report. Torsion of lipoma of appendix epiploic: CT evaluation. Journal of Computer Assisted Tomography. 1985;9(2):366-68.
[7] Wolko JD, Rosenfeld DL, Lazar MJ, Underberg-Davis SJ. Torsion of a giant mesenteric lipoma. Pediatric Radiology. 2003;33(1):34-36.
[8] Beattie GC, Irwin ST. Torsion of an omental lipoma presenting as an emergency. International Journal of Clinical Practice. 2005;(147):130-31.
[9] Macari M, Laks S, Hajdu C, Babb J. Caecal epiploic appendagitis: An unlikely occurrence. Clinical Radiology. 2008;63(8):895-900.
[10] Aunan E, Naess A. Torsion of intra-abdominal lipoma—a rare cause of recurrent or acute abdominal pain. Case report. Acta Chirurgica Scandinavica. 1988;154(9):539-40.

PARTICULARS OF CONTRIBUTORS:
1. Professor, Department of Obstetrics and Gynaecology, Chettinad Hospital and Research Institute, Chettinad Academy and Research Education, Chennai, Tamil Nadu, India.
2. Assistant Professor, Department of Obstetrics and Gynaecology, Chettinad Hospital and Research Institute, Chettinad Academy and Research Education, Chennai, Tamil Nadu, India.
3. Associate Professor, Department of Obstetrics and Gynaecology, Chettinad Hospital and Research Institute, Chettinad Academy and Research Education, Chennai, Tamil Nadu, India.
4. Junior Resident, Department of Obstetrics and Gynaecology, Chettinad Hospital and Research Institute, Chettinad Academy and Research Education, Chennai, Tamil Nadu, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:
J Jennifer Britto,
102, Aroa Tower, PBEL City, OMR, Thaiyur, Kelambakkam, Chennai, Tamil Nadu, India.
E-mail: drjenni12345@gmail.com

PLAGIARISM CHECKING METHODS: [Jain H et al.]
- Plagiarism X-checker: Oct 09, 2021
- Manual Googling: Dec 17, 2021
- iThenticate Software: Jan 04, 2022 (7%)

ETYMOLOGY: Author Origin

AUTHOR DECLARATION:
- Financial or Other Competing Interests: None
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. NA

Date of Submission: **Oct 06, 2021**
Date of Peer Review: **Nov 25, 2021**
Date of Acceptance: **Jan 06, 2022**
Date of Publishing: **Apr 01, 2022**