



DERMOID CYST MIMICS RETAINED SURGICAL GAUZE (GOSSYPIBOMA)

Gynaecology

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ABSTRACT

Benign cystic teratoma (Dermoid cyst) is the most common Germ cell tumor; it rarely grows larger than 10 cm in diameter and usually occurs in young women with peak incidence between the ages of 20 and 40 years. We report a case of an unusually massive benign cystic teratoma measuring 16*14 cm removed from a 42year old female with history of total abdominal hysterectomy. MRI showed left adnexal complex mass which by radiologists was suspected to be dermoid cyst or retained surgical gauge forming gossypiboma (*Gossypiboma is a rare condition caused by retained postoperative foreign bodies. The condition is under reported because of diagnostic difficulties and medicolegal implications associated with it. It may mimic a benign or malignant soft-tissue tumour in the abdomen and pelvis*). She underwent an operative laparoscopic cystectomy. Histopathological diagnosis confirmed the tumor to be a benign cystic teratoma.

KEYWORDS

Benign cystic teratoma; dermoid cyst and gossypiboma

Introduction:

Germ cell tumors of the ovary form a group of neoplasms comprising of many individual and mixed entities. Approximately 25-30% of all ovarian tumors are of Germ cell origin and of these, 95% are benign and only 3-4% are malignant. Benign cystic teratomas (Dermoid cyst) account for 10-20% of all ovarian neoplasms. They are encountered predominantly in women in their second and third decades of life and they rarely grow larger than 15 cm. We present a case of dermoid cyst of size 14x16cm cm in postmenopausal women mimicking a gossypiboma. Our case report emphasizes that dermoid cyst should be considered as differential diagnosis in case of gossypiboma and should be managed accordingly

DERMOID CYST		GOSSYPIBOMA
1.History	No proceeding H/O intervention /surgery	Previous H/O surgery
2. examination	Can be palpable of any size	Size will be of a sponge or surgical gauze
3 .investigation	Tumor markers like CA119 and CA125 may be elevated	Tumor marker not elevated
4 .Ultrasound	Partially echogenic mass and sebaceous material and hair	Hypoechoic with areas of high echoes and acoustic shadowing.
5 .MRI	Fat density on all sequences	Peripheral wall of low signal intensity at T1 and weighted imaging and enhancement at contrast –enhanced T1 –weighted imaging
6 .CT SCAN	Fat, fluid and sometimes calcification	Calcification and gas seen

Case presentation

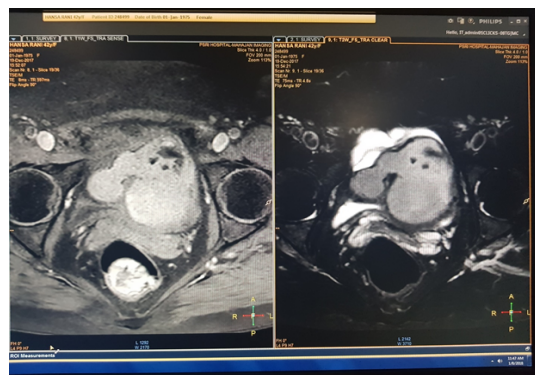
Patient P2L2 multiparous presented with lower abdominal pain. She had history of total abdominal hysterectomy in 2008, 2 cesarean sections and appendicectomy. On bimanual examination huge mass with ill defined margins of about 14x16 weeks size uterus found in lower abdomen. Ultra sound revealed left adnexal complex mass measuring 7x8cm, on MRI left adnexal complex mass measuring 7.1x6.1x6.7cm seen the mass shows a well –defined capsule which is low in signal intensity on all the pulse sequences, on the T1and T2

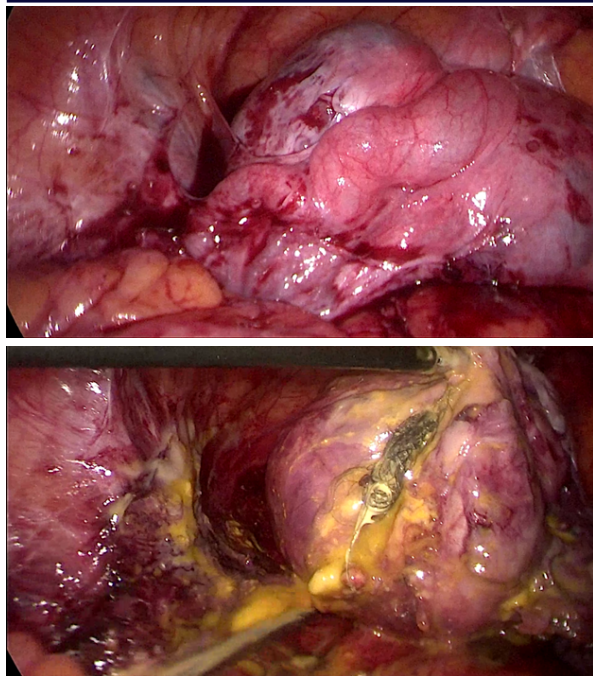
weighted sequences, the intermediate signal with areas of high single intensity; the high single areas show single suppression on the fat suppressed sequences suggesting lipomatous of calcifications. A loculated T2 hyper tense cystic intensity lesion showing a thin wall and few internal septation, measuring 14x16cm in maximum in biaxial dimension is seen in the anterior aspect of the above mentioned mass. The left ovary is not separately identified from the lesion ,the mass is abutting the sigmoid colon with maintained intervening fat planes was .the right ovary appears normal, few follicles are noted in the ovary, suggestive of Germ cell tumor or gossypiboma.

On blood examination thyroid stimulating hormone (TSH= 9.4) and Tumor markers for epithelial ovarian malignancy done, CA125 was normal (5.19), alpha feto protein (4.66) ECG and chest x-ray and rest of blood investigations were normal.

Operative laparoscopy done. In situ findings were suggestive of adhesions seen in whole abdomen between omentum and anterior abdominal wall. Left tubo-ovarian large mass of 16x14cm seen in lower abdomen it was adherent to the bowel, left lateral wall and anterior abdominal wall.

Left tube was enlarged and adherent to the left ovarian cyst. Fine dissection done mass reflected from the bowel and anterior abdominal wall, sebaceous material and hair seen s/o dermoid cyst, removed in endobag.





Discussion

Benign cystic teratomas, often called Ovarian Dermoids, account for 97% of ovarian teratomas and 10 - 20% of ovarian neoplasms. They are usually around 5 -15 cm in diameter, often heavy for their size and frequently on a long pedicle. These latter features account for a ready liability to torsion. The cyst can occur at any age, but 90% occur in women of reproductive age. Our Patient was 42 years old and postmenopausal and no diagnostic modality could diagnose the ovarian cyst as a dermoid.

Dermoid cyst, or mature cystic teratoma, is the most common type of ovarian germ cell tumor, comprising up to 30% of all masses [1]. It is common in younger age group below 20 years old and are in old age group [2]. They are bilateral in 10 –13% of cases. The incidence of malignant elements in a teratoma is low (approximately 1–2%) [3]. Gonadal dermoid cysts occur mostly during the reproductive years, between the ages of 20 and 40 years [4]. They are frequently multicystic and contain sebaceous fluid as well as hair, teeth, bone, and skin. Typically, these tumors contain mature tissues of ectodermal (skin, brain), mesodermal (muscle, fat), and endodermal (mucinous or ciliated epithelium) origin [5]. They have a characteristic CT scan appearance with fat/fluid level attenuation and calcification or ossification, as demonstrated. The classic sonographic appearance is of a hyperechoic mass known as a dermoid plug or Rokitansky protuberance. The Rokitansky protuberance is composed of the thickened area of ectodermal tissue from which hair and teeth arise. Pain is often related to the size of the mass, and ovarian torsion is common. Mature cystic teratomas grow slowly at an average rate of 1.8 mm each year, prompting some investigators to advocate non-surgical management of smaller (6 cm) tumors. All these features were not found in our case. There can be malignant transformation of mature teratoma. Also there is few cases reported in which benign tumor (often mucinous cystadenoma coexist with mature teratoma) [6].

Histopathologically in our case specimen contain more of sebaceous and few hair follicles. Normally in mature dermoid cyst the tumors represent one form of ovarian germ cell tumor which contains variety of mature, well-differentiated tissue elements may be found from all three embryologic germ layers (ectoderm, mesoderm, and endoderm). These tumors are often called “dermoid cysts” because they are mostly cystic and mostly contain ectodermal elements, typically resulting in the abundant hair seen here.

The cystic nature of a mature teratoma of ovary is seen here in this hemisected tumor mass. The most common tissue element of these teratomas is skin, so large amounts of hair and sebum are produced, leading to a challenging clean up problem in surgical pathology following dissection of these tumors. If these tumors are mostly solid, then they are often “immature” teratomas with less differentiated

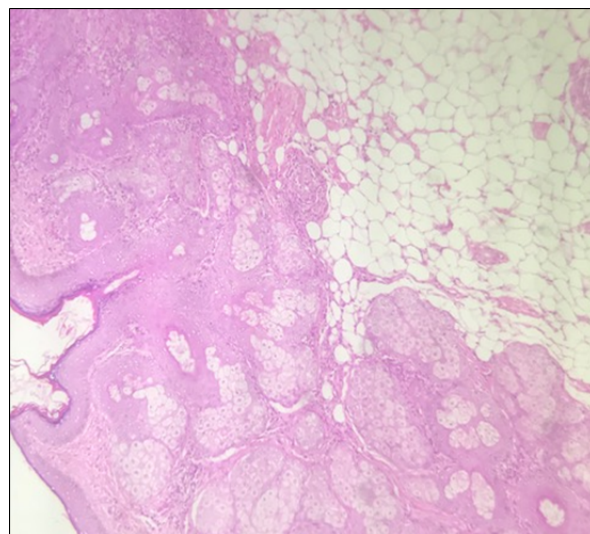
tissue. In deferential diagnosis gossypiboma should be kept in mind, Many radiologic findings are characteristically used to diagnose gossypiboma. The retained sponge containing a radiopaque marker can be easily diagnosed by conventional radiography except when it breaks into pieces or if the radiopaque marker becomes bound or folded in which case the retained sponge might not be identified at conventional radiography [5]. On sonography, a retained sponge is seen as a well-defined hypoechoic mass with a wavy hyperechoic area and dense acoustic shadowing [12] while CT scans typically reveals it as a well-defined soft-tissue mass and may show a whorled texture or a spongiform pattern with contained gas bubbles [13]. On MRI, gossypiboma manifest as a well-defined mass that showed a peripheral wall of low signal intensity at T1- and T2-weighted imaging and enhancement at contrast-enhanced T1-weighted imaging. The serrated contour in the inner border of the peripheral wall was shown at contrast-enhanced T1-weighted imaging and on T2-weighted imaging; the whorled stripes within the central portion were characteristically shown as low signal [14,15].

As with many other medical problems prevention is better than cure for gossypibomas. Implementation and strict adherence to following measures is of utmost importance. Meticulous preoperative and postoperative counting of all surgical materials, routine use of sponges impregnated with a radio-opaque marker and thorough exploration of the abdominal cavity at the conclusion of the surgery even in the face of correct counts.

Despite thorough history, physical examination, laboratory, and radiographical findings, usually gossypibomas are not suspected and remain an accidental finding. Often the presumptive diagnosis is that of a tumour. This is especially true in situations like in our case, where extensive preoperative workup is not feasible either due to non affordability or non compliance of the patient.

Histopathology:

The surgical management of benign cystic teratoma should be directed according to age for further fertility and presence of concomitant pelvic pathology rather than size or laterality status laparoscopic management of dermoid cyst is safe and effective and can therefore be highly recommended in our case. The cyst was enlarged up to 16 weeks uterus and MRI was suggestive of dermoid cyst or gossypiboma ,hence operative ovarian cystectomy done and specimen sent for histopathology which revealed mature cystic teratoma.



Conclusion

There are many reported cases of ovarian tumor but a huge dermoid cyst in post operative patient is rare. In conclusion the situation is double pronged, on one hand there is diagnostic dilemma, and on the other hand it carries medicolegal implications. Wide awareness is mandatory to avoid unnecessary psychological and physical morbidity, associated with missed diagnosis of the condition and employment of unnecessary aggressive surgical approach, also a high index of suspicion is required in postoperative patient presenting with nonspecific complaints.

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