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Case Report

COMPLICATED INGUINAL HERNIA OR INGUINAL DERMOID: A DIAGNOSTIC DILEMMA

SHARANJIT SINGH BASRA[1], VISHAL VERMA[1], RAVISHEKAR N HIREMATH[2], MOHIT MITTAL[1]

[1]Department of Surgery, AFMS, New Delhi, India. [2]Department of Community Medicine, AFMS, New Delhi, India. Email: sharanbasra77@gmail.com

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ABSTRACT

Simple or complicated inguinal hernias are the common inguinal lumps of any surgical emergency or outpatient settings. However, inguinal hematoma, abscess, enlarged inguinal lymph node, undescended testis, lipoma, or encysted hydrocele of the spermatic cord are few relatively less common entities seen in inguinal region whereas inguinal supernumerary pectineus bursa, preperitoneal lipoma, pedunculated uterine fibromyoma, angioma of uterine ligament, inguinal endometriosis, aneurysm of femoral artery, saphena varix, and thrombophlebitis are extremely uncommon entities of the groin region. We present an interesting case in which patient presented with painful firm lump in inguinal region and the history and clinical examination was consistent with the diagnosis of an incarcerated inguinal hernia but intraoperative findings amazed us and subsequently histopathological analysis labeled it a dermoid cyst.

Keywords: Dermoid, Incarcerated, Inguinal hernias.

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INTRODUCTION

Dermoid cysts are common developmental lesions occurring along the line of embryonic fusion when skin and skin structures become trapped during fetal development. The most frequent sites are supraorbital region of forehead and midline [1]. Cutaneous and subcutaneous dermoid cysts occur most frequently on the face, neck, or scalp; however, intracranial, intraspinal, or perispinal and anterior abdominal wall are few of the uncommon locations. Intra-abdominal dermoidshave been reported in the ovary which are notoriously more prone for complications such as torsion, hemorrhage, and patient may present with acute abdomen. Rarely ovarian dermoid may turn malignant. Dermoid cyst as a cause of inguinal canal lump is quite rare which generally imposes diagnostic challenge to the surgeons and creates confusion among common differentials of groin lump. While searching and analyzing the literature our team found only limited case reports describing a dermoid cyst of the inguinal canal masquerading as irreducible or complicated inguinal hernia in adultpatients [2-4]. Two variants of dermoid cyst areteratomatous or non-teratomatousand the later one is relatively common in the inguinal canal [5-7].

CASE REPORT

We present a case of 25-year-old male patient who reported to our center with a left-sided painless oblong inguinal swelling for a duration of 1 year (Approx 8 cm × 4 cm) with sudden onset pain and raised temperature at the swelling site for the past 24 h. The swelling used to increase in size on standing or straining and regress in size on lying down. There were no associated features of intestinal obstruction. On clinical examination, there was a firm, warm, tender, doughy irreducible and non-compressible swelling measuring approximately 8 cm × 4 cm localized in left inguinal region. Impulse on coughing was absent. Ultrasonography of the left inguinal region revealed left-sided obstructed hernia with differential diagnosis of omentocele or enterocele. A clinicoradiological diagnosis of an incarcerated inguinal hernia was made and the patient was consented for an emergency open inguinal hernia repair. A special consent for stoma was also taken. Incision was centered 2.5 cm above the left inguinal ligament at the most prominent site of swelling. After deepening the operative wound using blunt and sharp dissection a thick walled 8 cm × 5 cm sac was identified at the floor of the left inguinal canal which was extending from deep ring proximally to tip of the left testis distally (Fig. 1). After dissecting away the sac from cord contents, it was revealed that it did not have any communication with the tunica vaginalis or peritoneal cavity. The contents of the sac were firm and non-reducible. On exploration of sac thick dirty white pultaceous foul smelling paste like material along with components of hair were seen and removed (Fig. 2). The sac and contents were eventually dissected off from the inguinal cord with no established communication. The complete sac along with its contents was removed completely. There was no evidence of direct or indirect hernia; however, the thinned out posterior wall (probably due to long standing pressure effects) was strengthened using 2-0 polypropylene. However, mesh reinforcement was not done in view of theprobability of infective sac contents. Postoperatively, the patient was treated with intravenous antibiotics, suture removal was done on 10th post-operative day and patient was discharged. Patient was kept on follow-up for 2 years and showed no signs of recurrence or pain. The histopathological examination of the specimen revealed dermoid cyst with characteristic features comprising thin-walled cystic lesion lined by mature keratinized squamous epithelium containing inspissated keratin and with abundance of sebaceous glands and eccrine glands in the cyst wall. There was no evidence dysplasia or malignancy (Fig. 3).

DISCUSSION

Dermoid cysts are congenital malformed epithelial remnants trapped in lines of embryonic fusion, commonly seen in adults and children. They remain asymptomatic when small in size however they manifest as pain or variable plethora of symptoms due to their pressure effects depending on their location. Masses in the inguinal canal other than hernias are rare occurrences and a high index of suspicion is required to diagnose them preoperatively. In general, it is a gradually growing benign lesion which is painless unless it gets infected or gets complicated. Diagnosis is generally clinical if present at their common sites such as supraorbital ridges, midline region, and subcutaneous region. However, USG is vital investigation for unusual sites such as groin, intraabdominal, spinal, or paraspinal region. Ultrasound was the investigation of choice in all reported cases with 58% sensitivity and 99% specificity in the diagnosis of dermoid cyst [8]. However, false diagnosis such as intramuscular hematoma or an inconclusive study can occur. Histological picture of dermoid cyst is characterized by an outer lining made up of highly differentiated squamous epithelium with

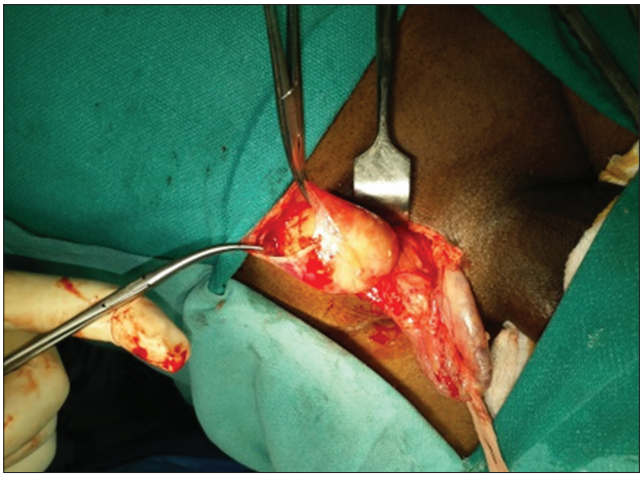

Fig. 1: Intraoperative picture showing dermoid cyst being dissected from spermatic cord

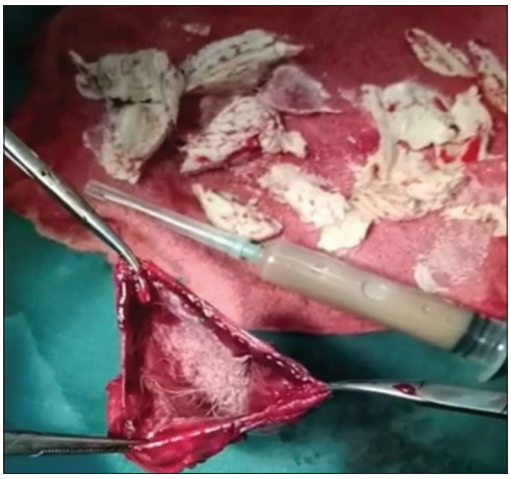

Fig. 2: Dermoid cyst opened up with hair paricle, pultaceous material and fluid after excision

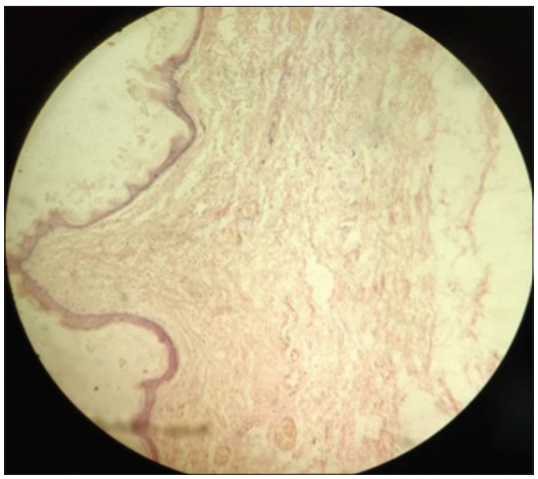

Fig. 3: Histopathology slide showing charetеristic features of dermoid cyst

an underlying fibrous connective tissue containing abundant of hair follicles, hairs, blood vessels, sebaceous, eccrine, and apocrine glands. The presence of skin and its appendages in dermoiddistinguish them from epidermoid and sebaceous cysts whereas absence of structures extraneous to the skin (i.e., cartilage, respiratory, or gastrointestinal mucosal lining cells) differentiate them from benign cystic teratomas found in the ovarian, testicular, retroperitoneal, and sacrococcygeal region [9]. Rare complications of dermoid cysts (especially intraabdominal cysts) includes torsion, hemorrhage, spontaneous rupture, infection, or extremely rare malignant transformation. Till date, there has been no description of these complications in cysts occurring specifically in the inguinal region. However, large dermoid cyst in the inguinal canal may result in direct inguinal hernia due to long standing constant pressure effect and subsequently thinning and weakening of posterior wall of the inguinal canal [9]. Treatment remains complete excision of the lesion and histopathological examination is must to rule out any malignant changes.

CONCLUSION

Dermoid cysts are common benign developmental anomalies lesions having rare occurrence in inguinal canal. Despite the overwhelming preponderance of inguinal hernias, several other pathologic entities may be encountered in the inguinal region**.** Although dermoid in the floor of the inguinal canal is an extremely rare entity but it must be included in the differential diagnosis of groin lumps, if encountered preoperatively or intraoperative complete excision should be done. A reasonable index of suspicion and appropriate timely investigations will not only avoid intraoperative surprises but also benefit the patient by diagnosing this uncommon entity which may give rise to potentially life-threatening complications.

PATIENT CONSENT

Patient consent statement has been taken for publishing this article.

CONFLICTS OF INTERESTS

The authors declared no conflicts of interest.

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REFERENCES

1. Genetzakis M, Lagoudianakis EE, Papadima A, Tsekouras DK, Markogiannakis H, Filis K, *et al*. Inguinal dermoid cyst of the round ligament. A case report and review of the literature. Clin Exp Obstet Gynecol 2006;33:249-51.
2. Brightmore T. Dermoid cyst of the inguinal canal simulating a strangulated inguinal hernia. Br J Clin Pract 1971;25:191. PMID 5575917
3. Das S, De U, Das D, Sarkar S. Inguinal dermoid cyst masquerading as irreducible inguinal hernia: A case report. Int J Case Rep Images 2012;3:47-9.
4. Kesari CR, Lakkanna S, Shetty R, Preethamraj AA. Dermoid cyst of inguinal canal masquerading as irreducible inguinal hernia: A case report with review of literature. JEMDS 2013;2:156-9.
5. Ashraf MS, Ansari BA, Iqbal N, Ansari A. Dermoid cyst of inguinal canal. J Indian Med Assoc 1985;82:1256.
6. Leeming R, Olsen M, Ponsky JL. Inguinal dermoid cyst presenting as incarcerated inguinal hernia. J Pediatr Surg 1992;27:117-8.
7. Farrands PA, Taylor I. Unusual groin swellings. Postgrad Med J 1984;60:309-11.
8. Ergun T, Lakadamyali H. A dermoid cyst of the round ligament clinically misdiagnosed as incarcerated inguinal hernia. Acta Chir Belg 2010;110:80-2. doi: 10.1080/00015458.2010.11680571, PMID 20306916
9. Salemis NS, Karagkiouzis G, Sambaziotis D, Tsiambas E. Large dermoid cyst of the spermatic cord presenting as an incarcerated hernia: A rare presentation and literature review. Hernia 2010;14:321-3. doi: 10.1007/s10029-009-0542-x, PMID 19669696