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Large Dermoid Cyst of Spermatic Cord Excised by Total Extra-peritoneal Approach

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Authors' contributions

This work was carried out in collaboration among all authors. Authors PG and TKT conceived the concept. Author DK wrote the first draft of the manuscript. Authors AA and AK managed the images. Author KK managed the literature searches. All authors read and approved the final manuscript.

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Case Report

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ABSTRACT

Dermoid Cysts of Spermatic cord are extremely rare with only a handful of cases being reported so far. We report a case of large left sided Dermoid Cyst of Spermatic cord in an adult patient. It was successfully removed via Laparoscopic Total Extra-Peritoneal approach. To the best of our knowledge, it is first such case of Spermatic Cord Dermoid cyst to be treated by this technique.

Keywords: Dermoid cyst; spermatic cord; total extra-peritoneal.

1. INTRODUCTION

Spermatic Cord tumours are uncommon and mostly benign [1]. Dermoid Cyst of Spermatic Cord is extremely rare and unlikely diagnosis of an inguinal swelling.

We report a case of large left sided Dermoid Cyst of Spermatic Cord in an adult patient. It was successfully removed via laparoscopic Total Extra-Peritoneal approach. To the best of our knowledge, it is first such case of Spermatic Cord Dermoid cyst to be treated by this technique [2].

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2. PRESENTATION OF CASE

A 20 years old male patient presented with complaints of dull ache in left lower part of abdomen with no other associated complaints. On examination a lump was palpable in left iliac region which was non tender.

An Ultrasonography was carried out which suggested a large cystic mass near left inguinal region. CT Scan showed a large well encapsulated cyst arising from Spermatic Cord abutting Urinary bladder. (Fig. 1). There were no signs of invasion of surrounding structures.

Decision was taken to excise the cyst via Laparoscopic Total Extra-Peritoneal approach, which is commonly used at our centre for inguinal hernia repairs.

Pre-operatively a Foley's catheter was inserted to empty the Bladder. Hasson's trocar was inserted in extra-peritoneal space infra-umbilically. Blunt dissection with camera scope created operating space and two more 5 mm ports were inserted below in midline. Cyst was visualised (Fig. 2).

Meticulous dissection was carried out with help of Ligasure. After cyst was completely separated from surrounding structures, it was removed with the help of an organ bag fashioned out of hand glove and was retrieved by enlarging suprapubic 5mm port. It measured 6x4x3 cms (length/breadth/thickness).On opening the specimen, it had pultaceous putty like material (Fig. 3).

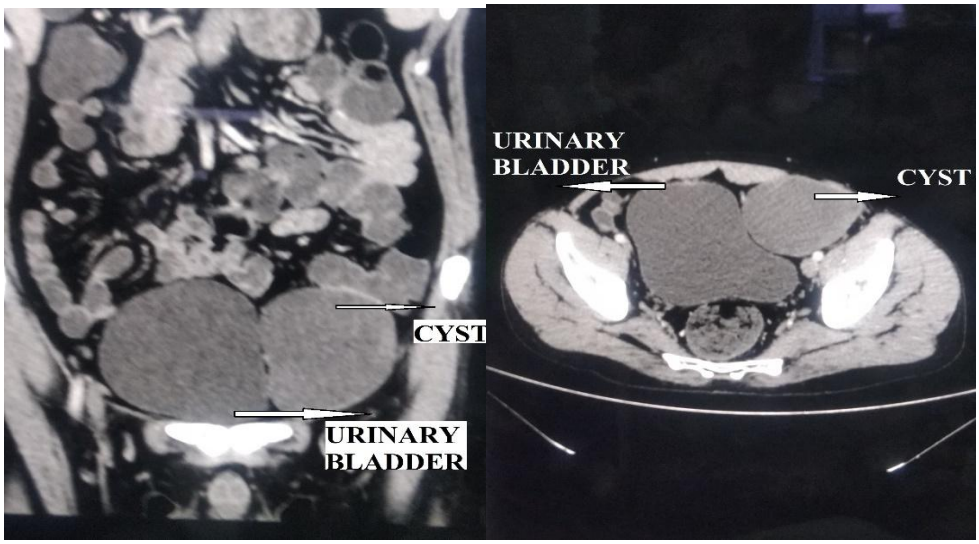

Fig. 1. CT image of cyst (Coronal and axial view)

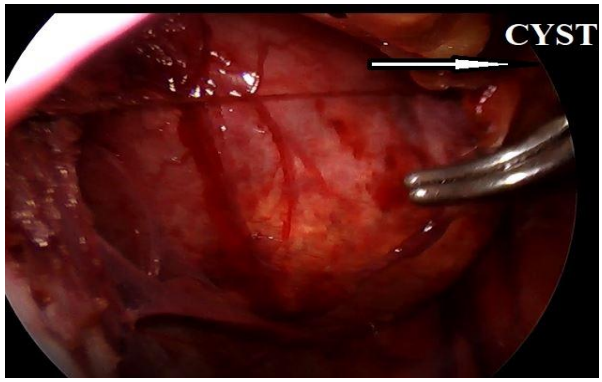

Fig. 2. Cyst visualised in inguinal region

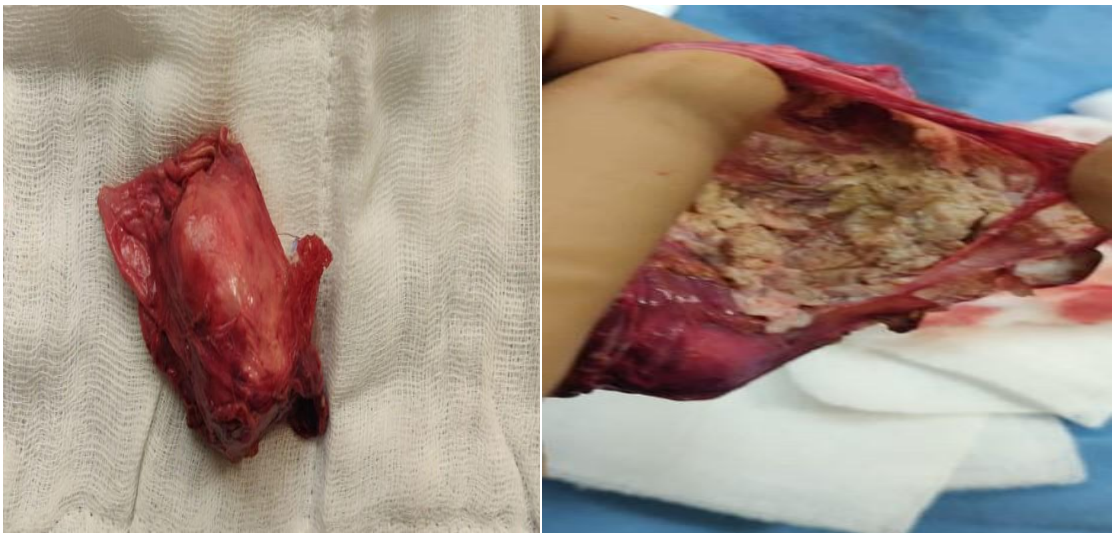

Fig. 3. Extracted specimen intact and cut open view

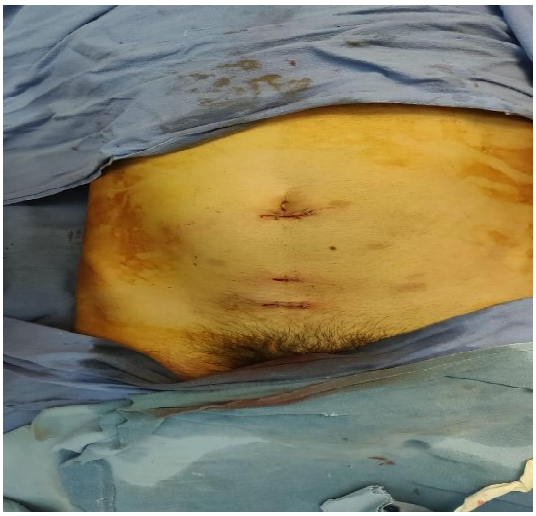

Fig. 4. Post-operative after closure of port sites

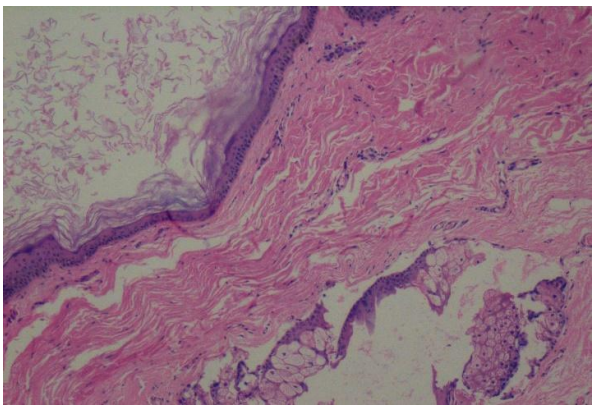

Fig. 5. Histopathology showing epithelial elements

Trocars were removed and port sites closed with subcutaneous sutures (Fig. 4). Patient's post-operative recovery was good. Foley's catheter was removed next day.

Histopathology report confirmed the diagnosis of a Dermoid cyst with no evidence of invasion or any neoplastic change (Fig. 5).

3. DISCUSSION

Dermoid cysts develop when skin structures are trapped during foetal development. Common sites of Dermoid are Face, Neck or Scalp [1].

Most common clinical diagnosis of inguinal swelling in young male patients is inguinal hernia. Other usual possibilities are lipoma of the cord, undescended testis or muscular hematomas. It is difficult to establish diagnosis of Dermoid Cyst of Spermatic Cord on clinical examination [3].

Radiological findings are also nonspecific and these cysts may be reported as hydrocele of cord [4].

Histologically, Dermoid Cysts are externally lined by squamous epithelium and may contain hair follicles, skin appendages and sebaceous glands. They can be differentiated from epidermoid cysts by the presence of all the skin appendages in them [5,6].

Malignant transformation of Spermatic Cord Dermoid has not been reported and complete surgical excision is the definitive treatment[1].However, some studies recommend use of tumor markers like alpha-phetoprotein, beta-chorionic gonadotropin to rule out malignant change [7].

Dermoid cysts of Inguinal canal mostly present clinically as inguinal hernia, even mimicking complications of hernia like strangulation and hemmorage [8]. If the cyst is large and palpable a differential of lipoma or hydrocele of the cord is kept [9]. In females possibility of sliding ovary is kept due to cystic nature of swelling [10]. Hence in most cases they are explored with the open approach typically used for inguinal hernias.

In centres where total extra peritoneal(TEP) or trans abdominal pre peritoneal(TAPP) is routinely used for inguinal hernias, they may also be used for such suspected cases of cystic masses of Inguinal canal. In one reported case, on finding a cystic swelling in inguinal canal during TEP, approach was changed to TAPP [11]. Decision to use minimal access technique should be taken after proper analysis of patient and radiological imaging and should be done by a surgeon experienced in this approach. Most of exposure and dissection via TEP approach is similar to hernia, however risk of puncturing the cyst and bleeding during dissection is there. Retrieval of specimen should be done in an organ bag and may require enlarging one of the port sites. Threshold to convert to open approach should be low and this possibility should be explained to patient before surgery.

As demonstrated in this case minimally invasive approach is a feasible option with advantages of smaller scar and lesser post-operative pain over open approach. Total Extra- Peritoneal approach provided additional benefit of not entering the peritoneal cavity thus avoiding possibility of peritoneal contamination and complications of pneumoperitoneum.

4. CONCLUSION

Dermoid Cyst of Spermatic Cord is a rare entity which should be kept in a case of groin swelling. Complete surgical excision is therapeutic and helps in establishing histopathological diagnosis. In expert hands minimally invasive approach is feasible for such cases.

CONSENT

All authors declare that written informed consent was obtained from the patient (or other approved parties) for publication of this case report and accompanying images.

ETHICAL APPROVAL

All authors hereby declare that the procedure has been examined and approved by the appropriate ethics committee and has therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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