



Dermoid Cyst of Inguinal Region in Pediatric Patient

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Authors' contributions

This work was carried out in collaboration among all authors. All authors have contributed equally in the management and follow-up of the patient and in the compilation of this case report. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Dermoid cyst in the inguinal region is a rare case and it mimics encysted hydrocele in the inguinal region. A dermoid cyst of inguinal region is a rare cause of groin swelling, with 9 cases reported to date. In pediatric patients only one case was reported till date.

We present the case of a 6 year old boy with complaints of right sided inguinal swelling for 6 months. Postoperative histopathological examination confirmed the diagnosis of dermoid cyst.

Keywords: Dermoid cyst; inguinal swelling; pediatric swelling; dermoid cyst in inguinal region.

1. INTRODUCTION

“Normally dermoid cyst is a type of tumour that contains a cyst filled with tissues that are normally found in the outer layers of the

skin, sebaceous glands and sweat glands. These may also contain elements of teeth and hair. Dermoid cysts can occur anywhere in the body, but is usually seen in the skin over the head, ovary, testes, neck, lower back, face or in the

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central nervous system. Dermoid cyst is a benign swelling and character of grow slowly. It presents at birth but may not appear until later in life. Dermoid cyst is a type of a germ cell tumour called a mature teratoma" [1-3].

Most of the inguinal swellings in children are indirect hernias, but other pathologies may also be found. Other pathological conditions may similar to hernias, such as supernumerary pectineus bursa, preperitoneal lipoma, angioma of the round ligament, internal oblique muscle hematoma, pedunculated uterine fibroid, thrombophlebitis of the long saphenous vein, inguinal endometriosis, hydrocele, spermatocele, spermatic cord cyst, lymphangioma, undescended testis, lymphadenopathy, abscess and dermoid/epidermoid cyst. Dermoid cyst is a common developmental anomaly occurring along the embryonic fusion lines [4-6]. Hence we are reporting the rare case of paediatric patient with a dermoid cyst in inguinal region.

2. CASE REPORT

Presenting the case of a 6 year old boy with complaints of right sided inguinal swelling since 6 months. The patient was admitted in our ward with a 6 months history of a swelling in the right inguinal region that increased in size gradually. The physical examination of the inguinal canal revealed a soft, mobile, non-tender, irreducible swelling with no cough impulse that is not fixed to the skin with the overlying skin appearing normal. On examination, the abdomen was soft and non-tender. There was no cough impulses present in the inguinal region and the bilateral testes were normal on palpation.



Fig. 1. Pre operative right sided inguinal region swelling

In right inguinal region an ultrasound showed the presence of a mass consisting of a large cystic lesion with multiple internal echoes within. This measured 3 x 2 cm in size. There were no signs reported sonographically suggestive of an underlying malignancy.

The patient underwent for operative procedure of an exploration of the right inguinal region with the differential diagnosis of an encysted hydrocele or a lipoma of the cord among others. Intraoperatively, we noted a small soft mass, within the inguinal canal. It appeared separate from the spermatic cord and appeared to contain fat globules.



Fig. 2. Intra operative image showing Dermoid cyst stump attached



Fig. 3. Intra operative image after excision of dermoid cyst



Fig. 4. Dermoid cyst



Fig. 5. Dermoid cyst after opening

On macroscopic examination, the mass was a creamish brown, solitary globular structure with smooth capsulated external surface, measuring about 3 x 2 x 1 cm in size and partially covered by skin. On cut section, sebum was present. Histopathological section showed a histology of well-defined wall lined by stratified squamous epithelium with mature skin appendages (hair follicles and sebaceous gland) and a lumen filled with keratin. There was no sign suggestive of dysplasia or malignancy in the lining of the cyst. Thus histological appearance suggested a dermoid cyst.

3. DISCUSSION

Patients with right sided groin swelling can present to the surgery outpatient department. Though the most common diagnosis is an inguinal hernia, other causes of groin swellings include hydrocoeles, femoral hernia, undescended testes, lipomas, enlarged lymph nodes, femoral artery aneurysms, saphena varices, varicoceles etc. Rare causes include thrombophlebitis of the long saphenous vein and inguinal endometriosis in women. Usually most dermoid cysts occur during childhood before the age of 5 years but they can remain unnoticed until adulthood. A dermoid cyst in the inguinal region is a rare cause of groin swelling, with 9 cases reported to date.

“Dermoid were called to cysts lined by squamous epithelium occurring in different parts of the body. Dermoid cysts beneath the skin occur mostly on the face, scalp or neck. Dermoid cysts can also be present in intraspinal, peri spinal,

intracranial. During fetal development dermoid cysts occur when skin and skin structures become trapped. Intra-abdominal dermoid cysts can also occur in the ovary or omentum” [7,8]. “Histogenetically, dermoid cysts are a result of the sequestration of skin along the lines of embryonic closure. Histologically the wall of a dermoid cyst consists of all the components of the skin, sweat glands, including hair follicles and sebaceous glands” [9,10].

4. CONCLUSION

Dermoid cyst is a unusual, benign cause of a mass in the groin. The diagnosis may be suspected on ultrasound, but requires surgical excision and histopathological confirmation.

CONSENT

Consent has been taken from parents of the patient.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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