Case Report

Epidermoid Cyst in Inguinal Canal: A Rare Presentation

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Abstract

The patients presenting with lump in inguinal area are mostly suspected as hernias. Epidermoid cyst commonly presenting in head and neck region rarely may develop from inguinal canal structures. We present here a rare case of epidermoid cyst measuring 7×8 cm as a content of inguinal canal diagnosed by ultrasonography. Surgical excision was done and confirmed as epidermoid cyst by histopathology. We conclude that cutaneous cysts in inguinal area may be a presentation and should be kept in mind for differential diagnosis.

Keywords: *Dermoid cyst, epidermoid cyst, inguinal canal*

Introduction

Epidermal cysts are inclusion cyst either due to congenital invasion of epidermis into dermis or due to invagination of epithelium due to trauma or surgery. Although these cysts may appear anywhere in body, mostly present over forehead, scalp, face, neck and trunk region.[1] Epidermal cyst as a content of inguinal hernia is a rare finding. A high degree of suspicion is required for the diagnosis of epidermal cyst in inguinal area. A search of the English-speaking literature on Google and PubMed links with keywords such as epidermoid and dermoid cyst revealed very few cases of epidermoid cyst have been reported till date.[2-11]

Case Report

A 24-year-old male presented with a complaint of swelling in the left inguinal area for 6 months. The swelling was single, round to oval shape, slowly progressive in size over last 2–3 months. There was absence of any change in shape and size on exertion or straining. There was no history of pain and dragging sensation in the groin. On physical examination, the swelling was elliptical, measured 7 cm × 8 cm in size and confined to the left inguinal region only. Cough impulse was absent. Consistency was soft to firm and doughy feel present over swelling. The skin over the swelling was normal. Scrotum and both testes were normal. Other side of inguinal region was normal. Abdomen and per rectal examinations were within normal limits. Ultrasound showed well-defined homogenous rounded hypoechoic lesion in the left inguinal area measuring 5.3 cm × 4.8 cm × 3.7 cm with volume of about 50 ml (cystic lesion) [Figure 1]. Fine needle aspiration cytology of the swelling had features of the benign cystic lesion. Routine blood investigations were within normal limits. On exploration, a round cystic swelling found over the posterior wall of inguinal canal separated from the spermatic cord [Figure 2]. No direct or indirect hernial sac was found. The cyst was excised completely, and histopathological examination showed cyst lined by stratified squamous epithelium with preserved granular layer with retention of keratinous debris suggestive of epidermoid cyst [Figure 3].

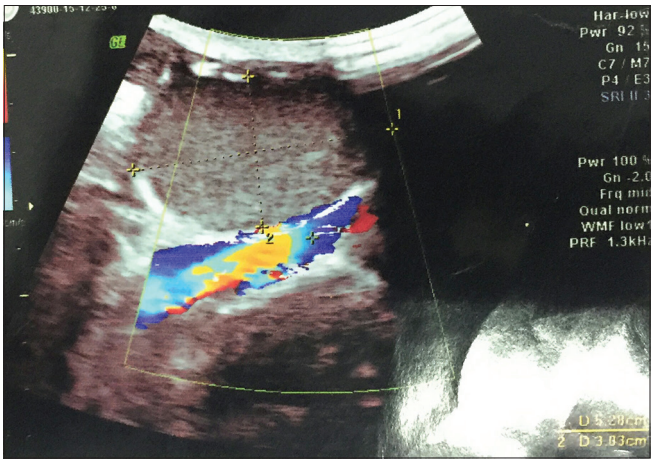

Figure 1: Ultrasound showing well-defined rounded homogeneous hypoechoic lesion in left inguinal area measuring 5.3 cm × 4.8 cm × 3.7 cm

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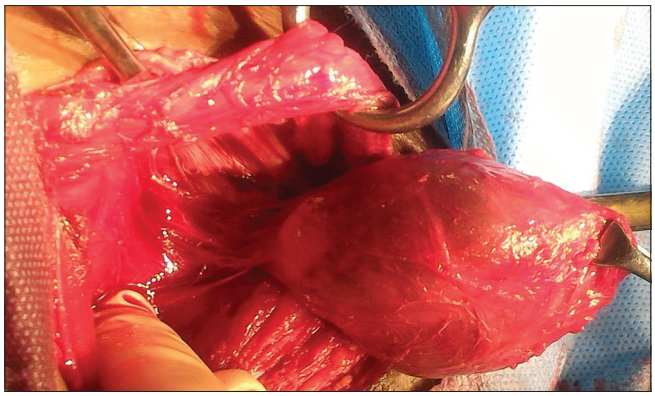

Figure 2: Intraoperative photograph showing cyst in inguinal canal separate from spermatic cord

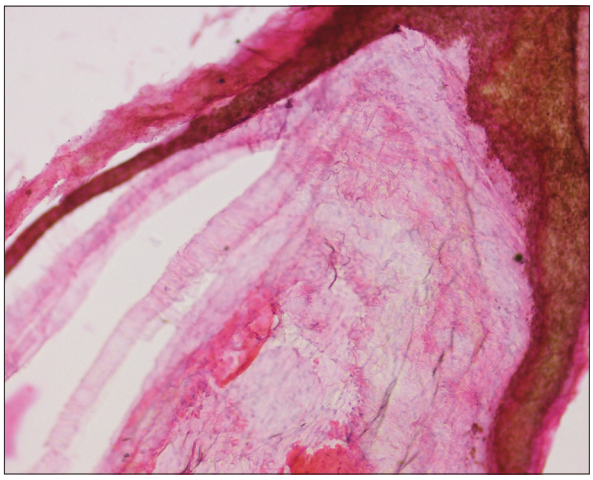

Figure 3: Histopathology section showing squamous epithelium-lined cyst filled with keratin debris (H and E, ×10)

Discussion

Epidermoid cysts are either congenital or acquired. Congenital cysts develop due to failure of separation of ectoderm from underlying neural tube or due to abnormal sequestration of surface ectoderm at embryonic fusion site. Acquired cyst arises from the inclusion of epidermal structures into dermis and deeper tissue, for example, in trauma.[12,13] In our patient, inguinal mass appeared to be a hernia sac at the first site of inspection which we tried to correlate to hernia. Any patient presenting with lump in inguinal area primarily clinches a diagnosis of hernia to the clinician as they are most common inguinal swellings. Differential diagnosis of inguinal swellings can be femoral hernia, undescended testes, lymphadenopathy, lipomas, saphena varix, varicosities, and endometriosis of round ligament and herniation of ovaries in females and rarely cutaneous cysts.[14]

Epidermal cyst in inguinal region is unusual and asks for a high degree of suspicion to make the correct diagnosis. In case of epidermal cyst, the patient presents with inguinal swelling which is generally nonprogressive or slowly progressive, soft to firm in consistency. They can be confused with hernial sac containing omentum as both may have doughy feel on palpation. Cough impulse is negative in cases other than inguinal hernias. As the cyst is irreducible, it can be misdiagnosed with irreducible or incarcerated hernias. They can also be confused with lipoma arising from spermatic cord, which are most common benign tumor of cord.

A case of inguinal hernia typically presents with typical history and most of the times diagnosis is made on clinical examination only. On examination, a pear-shaped or spherical bulge in groin with cough impulse is present over the deep and superficial inguinal rings in indirect and direct inguinal hernias, respectively. Not able to get above the swelling and negative transillumination test differentiates it from hydrocele of testis. The index case-patient presented with elliptical nonreducible inguinal swelling with absent cough impulse.

The dermoid and epidermoid cysts in inguinal canal are rarely present. Teratoma of the inguinoscrotal region is relatively common. Around 11 cases of dermoid cyst as a content of inguinal hernia have been reported.[15] On gross look, the dermoid cyst and epidermoid cyst may look similar, but they differ microscopically. Both are ectoderm-lined inclusion cysts differing in complexity of structures they contain. Both arise from trapped pouches of the ectoderm, near-normal folds, or from failure of the surface ectoderm to separate from the neural tube. Histologically, epidermoid cysts are lined by keratinizing squamous epithelium. They are different from dermoid cyst by means of absence dermal structure-like hair follicle, sebaceous glands, and sweat glands.[16] It is not always feasible to differentiate between these two as clinical manifestations are nonspecific and ultrasonography findings are not characteristic.[17] Sonography is the primary modality for investigating inguinal masses in both male and females. Ultrasonography with color Doppler is a quite useful modality to rule out differentials of cystic masses in groin of a female patient.[4,5] In our patient, sonography revealed well-defined, round, homogeneous hypoechoic mass unlikely to be a hernia sac. After diagnosing cysts, surgical excision is the treatment of choice for inguinal cysts. On exploration of inguinal area in our case, a cyst over posterior wall found in the absence of any sac.

Conclusion

Epidermal cyst presenting as inguinal selling is rare clinical entity but should be included in differential diagnosis of groin lump in both males and females. It can be differentiated from irreducible inguinal hernias by high degree of suspicion, clinical evaluation, and sonographic assistance. They need to be managed with

surgical exploration and diagnosis should be confirmed with histopathology.

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Conflicts of interest

There are no conflicts of interest.

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