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INGUINAL EPIDERMOID CYST MIMICKING INCARCERATED INGUINAL HERNIA A DIAGNOSTIC DILEMMA

General Surgery

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ABSTRACT

Epidermoid cysts are benign, slow-growing lesions that arise from the entrapment or implantation of epidermal elements within the dermis. While these cysts can occur throughout the body, their development within the inguinal canal is an exceedingly rare phenomenon. Primarily Patient was diagnosed clinically as incarcerated inguinal hernia, but after evaluation inguinal epidermoid cyst was diagnosed and managed with excision and biopsy This case report describes the presentation, evaluation, and surgical management of an inguinal epidermoid cyst. The rarity of this condition, coupled with the importance of maintaining a broad differential diagnosis for inguinal masses, underscores the value in documenting these uncommon clinical encounters.. Conclusion- Inguinal epidermoid cysts, although uncommon, should be considered in the differential diagnosis of groin masses.

KEYWORDS

inguinal cyst, epidermoid cyst, incarcerated hernia, irreducible hernia

INTRODUCTION

Epidermoid cysts are benign, slow-growing lesions that arise from the entrapment or implantation of epidermal elements within the dermis. While these cysts can occur throughout the body, their development within the inguinal canal is an exceedingly rare phenomenon [1].

Till to date, only a handful of cases of inguinal epidermoid cysts have been reported in the literature [1-4]. These lesions can clinically mimic more common inguinal pathologies, such as hernias or lipomas, posing a diagnostic challenge. Accurate preoperative identification is crucial, as misdiagnosis may lead to inappropriate management [5].

This case report describes the presentation, evaluation, and surgical management of an inguinal epidermoid cyst. The rarity of this condition, coupled with the importance of maintaining a broad differential diagnosis for inguinal masses, underscores the value in documenting these uncommon clinical encounters.

CASE REPORT:

A 55-year-old male patient presented to Surgery casualty with chief Complains of swelling in both inguinal region from last 5 years and dull aching pain from last 2 days. There was history of reducible swelling in the right inguinal region which increases in size and straining previously but now the swelling not going inside the abdomen. On other side, left inguinal swelling (Fig.1) was insidious in onset, gradually progressive in nature, painless did not show any reducibility or cough impulse. Furthermore, he denied experiencing any constipation, nausea, vomiting or obstipation symptoms. Upon presentation, the patient was fully conscious, alert oriented to time, place and person. his vital signs were as follow:
Blood pressure 100/70 mmHg

Temperature 36.7°C

Heart rate-70 beats per minute

SpO2 98% Room Air

B/L Chest – VBS+ No added sound
P/A- Soft+ Non tender BS+

Local Examination–
Left side Globular swelling of size 4*5cm, smooth surface, ill-defined margin, farm in consistency, local rise of temperature and mild tenderness was present.

Right side – Irreducible indirect inguinal hernia without any complication.

Primarily Patient was diagnosed clinically as incarcerated inguinal hernia and he was admitted, kept in nil-per-oral and IV fluid and analgesics were given. an ultrasound examination of bilateral groin revealed, left sided well defined complex Structure exhibiting, mixed echogenic echogenicity, similar to subcutaneous fat and a dash-and-dot appearance seen, size about 5.2*4.2 cm, those features raised suspicion of an accompanying inguinal cyst. USG of right groin Revealed a reducible inguinal hernia omentum as a content. After diagnosis, the patient was gone through open Lichenstain tension free mesh hernioplasty on right inguinal region and on exploration in left side suspected cyst was confirmed in left inguinal canal attached with cord structure (Fig. 1,2). Cyst was carefully Dissected and excised and send for histopathological examination (Fig.3).

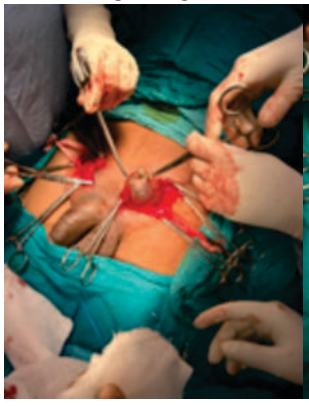

Figure 1 *cyst in the Inguinal canal*

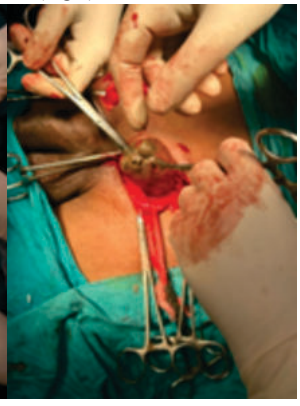

Figure 2 *cyst is being dissected*

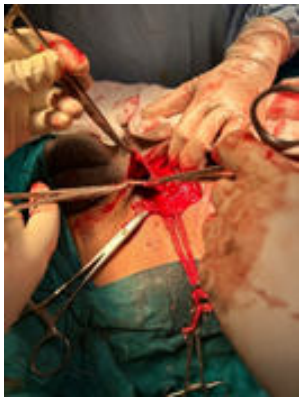

Figure 3 *cyst sac is opened and excised*

Postoperatively, the patient was vitally stable, ambulatory, and maintained a clean surgical dressing. The cyst was Pathological characterized (Fig.4) by

- Thin layer of keratinized stratified squamous epithelium (Fig.4 red arrow)
- Lumen filled with laminated keratin.
- Lack of Appendages, Absence of hair follicles, sebaceous glands, and sweat glands.
- Granulomatous Inflammation giant cells and inflammatory cells

were seen.

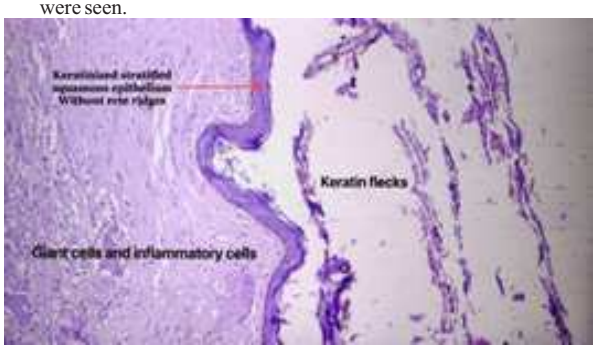

Figure 4 *HPE of the inguinal cyst*

As of his last follow-up, patient displayed satisfactory healing without any complication or recurrences.

DISCUSSION

Epidermoid cysts are benign, slow-growing lesions that arise from the entrapment or implantation of epidermal elements within the dermis. While these cysts can occur throughout the body, their development within the inguinal canal is an exceedingly rare phenomenon [1,2,3,6]. The rarity of inguinal epidermoid cysts is underscored by the limited number of cases reported in the literature to date. A review of the available case reports highlights several key features of this uncommon condition.

- Epidermoid cysts in the inguinal region can clinically mimic more common inguinal pathologies, such as hernias or lipomas, posing a diagnostic challenge [1,2]. A high index of suspicion is required to consider this rare entity in the differential diagnosis.
- Accurate preoperative identification is crucial, as misdiagnosis may lead to inappropriate management. Strategic use of imaging modalities like ultrasonography can help distinguish epidermoid cysts from other inguinal masses [1,2,6].
- Complete surgical excision remains the treatment of choice, with histopathological confirmation of the diagnosis [1,2,7]. Recurrence is uncommon following complete resection.

In the present case, the inguinal mass was initially suspected to be a hernia based on the clinical presentation. However, further evaluation with ultrasonography revealed the characteristic features of an epidermoid cyst, prompting appropriate surgical management.

This case report underscores the importance of maintaining a broad differential diagnosis when evaluating inguinal masses, and highlights the value in documenting these rare clinical encounters to further our understanding of this uncommon condition.

CONCLUSIONS

Inguinal epidermoid cysts, although uncommon, should be considered in the differential diagnosis of groin masses. This case highlights the importance of thorough clinical evaluation and appropriate imaging to distinguish these benign lesions from other potential inguinal pathologies such as hernias, lymphadenopathy, and malignancies. Surgical excision remains the treatment of choice, providing both definitive diagnosis and symptom relief. Histopathological examination is crucial to confirm the diagnosis and rule out malignancy. Awareness and understanding of this condition can aid clinicians in managing similar cases effectively, ensuring optimal patient outcomes.

Abbreviations:

VBS- Vesicular breath sound **BS-** Bowel sound B**/L**- Bilateral mmHg-Millimeter of mercury **HPE**-Histopathological examination

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