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Case Report

Rare Location of Epidermal Inclusion Cyst in a Child - A Case Report

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Abstract

Epidermal inclusion cysts are benign lesions rarely found in the clitoris. This case report describes a 7-year-old girl presenting with a 2-year history of a painless clitoral swelling. Examination revealed a 1x2 cm firm, well-circumscribed cyst on the clitoral head. Fine needle aspiration (FNA) and magnetic resonance imaging (MRI) suggested an epidermal inclusion cyst. The cyst was excised surgically with preservation of clitoral anatomy. Histopathological examination confirmed the diagnosis. This report highlights the rarity of clitoral epidermal inclusion cysts and emphasizes the importance of considering this diagnosis in cases of clitoromegaly. A detailed history and examination can often differentiate this condition from other causes, avoiding unnecessary investigations. Surgical excision with clitoral preservation is the mainstay of treatment, aiming for optimal functional and cosmetic outcomes. A review of five published case reports of clitoral epidermal inclusion cysts is also included for comparison.

Keywords: *Clitoral cyst, Epidermal inclusion cyst, Rare, Clitoromegaly*

Introduction

An epidermal inclusion cyst, also called an epidermoid cyst is a benign cyst resulting from the implantation of superficial epidermal tissue into the dermis or subcutaneous tissue. Common areas of occurrence include the scalp, face, neck, trunk and extremities. They are very rarely seen in the clitoral or vulvar region, most often associated with prior trauma1 or surgery2 to the area, particularly female genital mutilation. Overall incidence of clitoral cyst in childhood is approximately 0.6%. Only isolated case reports are present for epidermal clitoral cyst.

It presents a diagnostic challenge as initially it is usually investigated as a disorder of sexual differentiation. Diagnosis is made on the basis of detailed history and examination only.

Case Presentation

- A seven-year-old female presented to the outpatient department with a history of clitoral swelling since 2 years of age.
- There was no pain associated with the swelling.
- The child had minimal urinary symptoms in form of a deflected urinary stream and occasional dysuria.
- No history of trauma or prior surgery was noted.

General Examination

- Unremarkable. The child was of average built and nourishment.
- There were no signs of virilization.

Local Examination

- A cystic swelling of 1*2 cm was seen involving clitoral head, firm and well circumscribed.
- No encroachment into the vulva was seen.
- Labial folds were normal.
- No signs of inflammation were noted.

Investigations

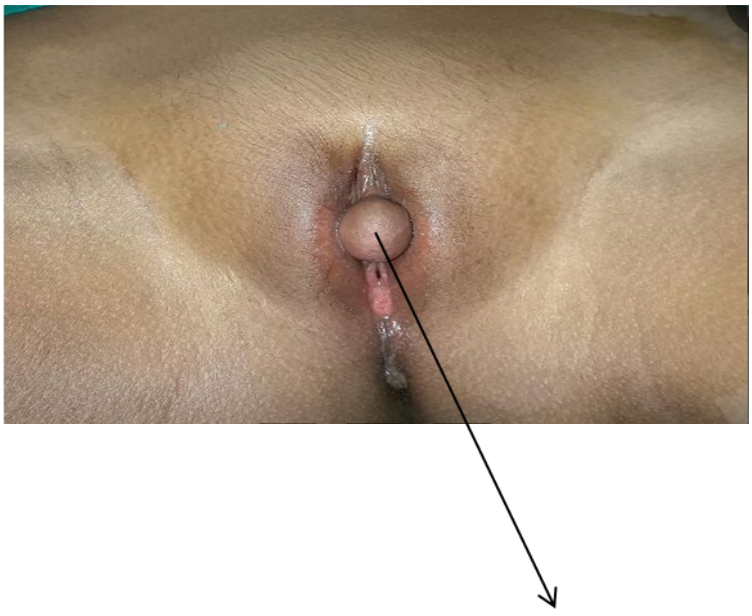
- FNA: Inclusion cyst of the epidermis.
- MRI: Suggestive of epidermal cystic lesion.

Management

- After due workup for surgery the child was taken up for definitive excision and clitoral preservation surgery.
- Complete excision of cyst was done by an inverted V shaped incision, with preservation of the clitoral anatomy and structure.
- No recurrence of the cyst was noted at 6 months follow up.
- The urinary symptoms had also disappeared.

Histopathological Examination

- Histological examination revealed an epithelium lined cyst filled with laminated keratin located within the dermis. No rete ridges were seen. Keratohyalin granules were seen within granular layer, consistent with Epidermal Inclusion Cyst.



Well circumscribed clitoral cyst.

Discussion

Epidermal cysts are benign tumors formed due to invagination of keratinized squamous epithelium which can involve any part of body. The cysts are fluid filled and are often mistaken for sebaceous cysts. Clitoral involvement is very rare. Most commonly they are post traumatic, rarely spontaneous onset is seen.

A detailed history and examination can exclude many causes of clitoromegaly[3] and spare the child from unnecessary investigation and delay in surgery. The other causes of clitoromegaly include:

- Endocrinal causes (Congenital adrenal hyperplasia, steroid producing gonadal tumor, adrenal androgen secreting carcinoma).
- Non-endocrinal causes (Neurofibroma, epidermal cyst, hemangioma).

Objectives of treatment of a clitoral cyst include a straight-forward excision aiming at preservation of clitoral sensations and cosmetic appearance. An inverted V-shaped incision preserves neuro-vascular bundles and allows for a near normal looking clitoris post surgery.

Published Case Reports in Literature

Sr. No	Age in years	Size (cm)	Clinical Presentation	Investigations	Treatment
1.	5	1*2	Clitoral swelling since infancy	USG Abdomen to look at the ovaries and uterus	Complete Surgical Excision
2.	9	2*3	Cystic clitoral swelling	USG Abdomen	Complete Surgical Excision
3.	5	4*5	Clitoral swelling for 2 years	MRI Abdomen	Excision with MRI guidance
4.	17	2*2	Clitoromegaly	-	Complete Surgical Excision
5.	5	4*3	Cystic swelling at the root of clitoris	USG Abdomen	Complete Surgical Excision

Conclusions

- Clitoral epidermal cysts are extremely rare and require a high index of suspicion to rule out other causes of clitoromegaly.
- Detailed history and examination are often enough for diagnosis.
- Surgery aims at preserving function and cosmesis.

Acknowledgements

None.

Conflict of Interest

No potential conflicts of interest to disclose.

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