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Epidermal cyst in an unusual site: A case report

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ABSTRACT

INTRODUCTION: Epidermoid cysts can occur in a variety of locations including face, trunk, neck, extremities and scalp. Up to now, those vulvar epidermal cysts reported in the literature were localized on the labia majora and the clitoris. This is the first case of epidermal cyst reported on the labia minora.
PRESENTATION OF CASE: A 47-year-old, multiparous woman presented with a history of a palpable vulvar mass, without pain but causing difficulty in walking. The large mass was 6 cm in diameter and located in the left labium minus. The labial mass was surgically removed. The final pathologic diagnosis was a vulvar epidermoid cyst. The patient was discharged from hospital without any complications.
DISCUSSION: Total surgical excision of the mass is more appropriate for definitive histopathological diagnosis and for the prevention of future development of complications. MRI is very important in the localization of the mass and relationship with other tissues regarding treatment planning of larger vulvar masses.
CONCLUSION: Epidermal cysts should be considered in the differential diagnosis of a vulvar mass.

1. Introduction

Benign tumors of the vulva are very rarely seen. Epidermal cysts are intradermal or subcutaneous tumors contained within the epidermis. They are formed as a result of invagination of keratinized squamous epithelium [1]. Epidermal cysts can be located in any part of the body, though mainly on the face, torso, extremities and scalp, but they are rarely localized on the vulva [2,3]. Vulvar epidermoid cysts have been reported to be frequently localized on the clitoral region and labia majora [4–10] .Vulvar epidermal cysts are frequently multicystic and the diameter of the largest loculus is less than 1 cm. They generally grow slowly and their growth process stops when their diameters reach 5 cm [4,5]. Histopathological diagnosis differentiates vulvar cysts from other vulvar lesions. For the treatment of a large vulvar cyst, total excision of the mass is a good approach.

We have reported this case because of its rare site of presentation; and it should be kept in mind that vulvar epidermal cyst should be considered in the differential diagnosis of vulvar mass Fig. 1.

2. Presentation of case

A 47-year-old, multiparous woman presented with a history of a palpable mass in the vulva, causing difficulties in walking. The mass had been gradually increasing in size for a period of approximately 12 months. The patient's medical history revealed that she had mild complaints because of a vulvar mass but she had not sought medical care. Her medical history was normal; she had no history of gynaecologic surgical procedures and no history of vulvar trauma. Physical examination at admission demonstrated a large ($6 \times 4 \times 3.5$ cm), regular contoured, mobile soft mass in the left labium minus. The uterus, cervix, vagina, and the patient's abdominal examination were normal. The labial mass was successfully surgically removed. Histopathological examination revealed the cyst was lined with stratified squamous epithelium and filled with keratin materials. The final pathologic diagnosis was of a vulvar epidermoid cyst. The patient was discharged from hospital without any complications two days postoperatively and her follow-ups continue in our outpatient clinic Fig. 2.

3. Discussion

Epidermoid cysts can occur in a variety of locations, including the face, trunk, neck, extremities and scalp. The rare vulvar cysts

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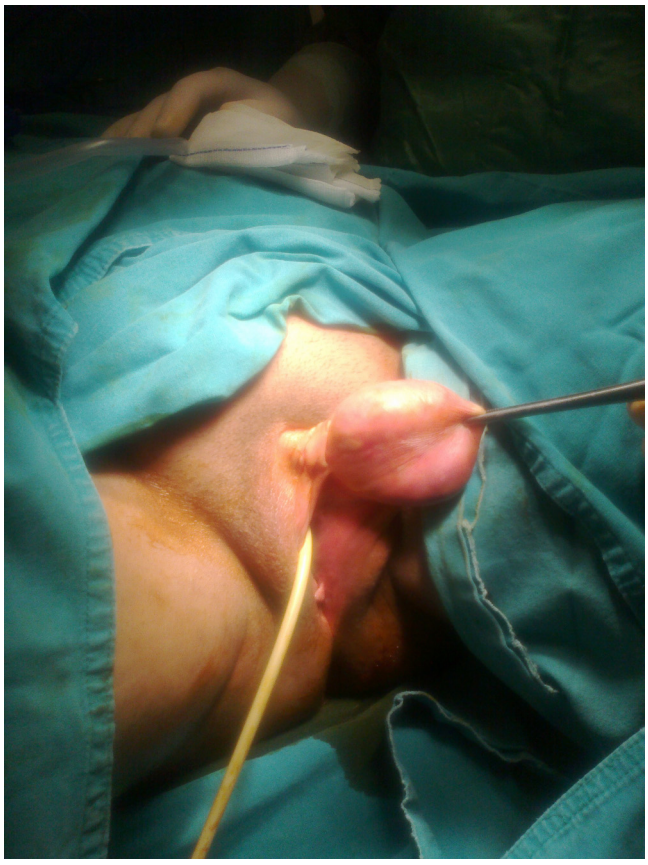

Fig. 1.

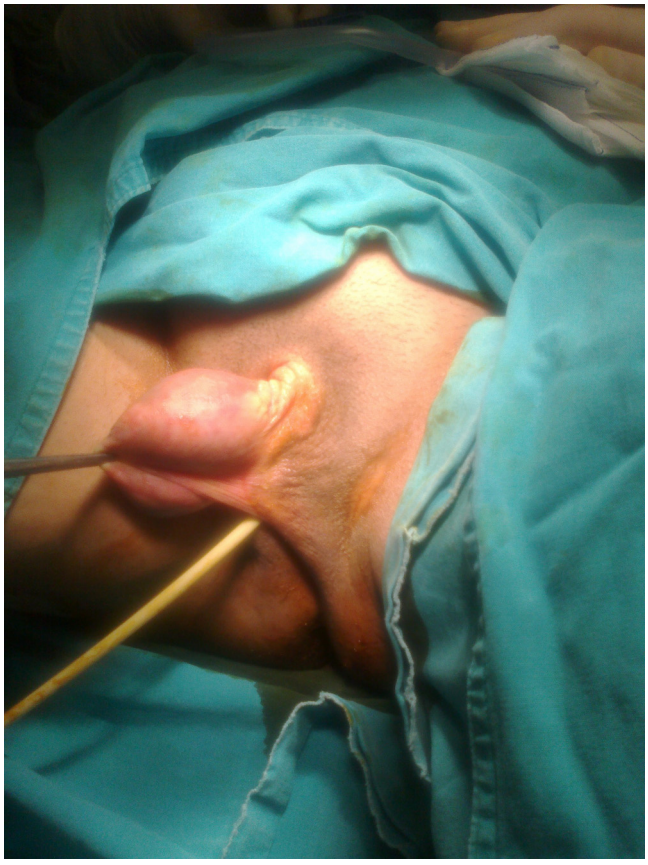

Fig. 2.

develop mostly as a result of implantation of superficial epidermal tissue into dermis or subcutaneous tissue following acquired aetiologies as exposure to trauma or following episiotomy. In addition, in some women with a certain ethnic origin and culture, vulvar epidermal cysts develop more frequently as a secondary effect of female circumcision [4,5]. Most of the vulvar epidermal cysts described so far have been localized on the clitoris; and circumcision procedures and trauma have been demonstrated as underlying causes. A few anecdotal cases of epidermal cysts localized on the clitoris and labia in patients without any history of trauma or surgery have been reported in the literature [6,7]. Our patient, who had a vulvar epidermal cyst, had not been previously exposed to trauma or undergone any surgical intervention.

Clinical presentations of the patients demonstrate some variations. The patients frequently present with an asymptomatic, slowly growing vulvar mass. As is the case with our patient, the patients may experience difficulty in walking because of the large cystic mass or a complicated and painful mass [7]. The diameter of the largest epidermal cyst so far reported in the literature has been 12 cm [11].

In the differential diagnosis of vulvar benign tumors which can develop on this location various cystic lesions must be considered. These include mucous cyst, cyst of the canal of Nuck, Bartholin's cyst, Skene's duct cyst, epidermal inclusion cyst, lipogenic tumors such as adenolipoma and lipomas; and also endometrioma, posttraumatic hematoma, inguinal hernia and vulvar syringoma, among rarely seen vulvar lesions. Malignant tumors of the vulva though rare, such as liposarcoma, should also be considered in the differential diagnosis [12–14].

For preoperative diagnosis, although detailed anamnesis and meticulous physical examination convey critical importance, MRI is very important in the localization of the mass and its relationship with other tissues regarding the planning for treatment of larger vulvar masses. Surgical excision is a preferred treatment for vulvar epidermal cysts. Some authors have asserted that asymptomatic cases could be followed up using clinical and radiological methods. However, surgical excision of large and disturbing vulvar masses has been performed for the treatment of many exemplary cases reported in the literature [7], and is a more appropriate alternative. Irrespective of the size of the mass, total surgical excision of the mass is more appropriate for definitive histopathological diagnosis and for the prevention of future development of complications including rupture of the cyst, hematoma, infection and (rarely) carcinoma.

Our case underwent total surgical excision. During surgical excision, a urologist was included in the operative team because of the close vicinity of the mass to the urethra. A Foley catheter was inserted through the urethra and the mass was then totally excised. The mass was easily dissected from neighboring tissues. Since the mass was localized within subcutaneous tissue away from any vascular structures, minimal bleeding occurred. However, if the mass extends into the vicinity of the clitoris and anus, the inferior haemorrhoidal and clitoral branches of the pudendal vessels may be traumatized leading to bleeding episodes. Haemostatic sutures should be used in cases of diffuse bleeding [11].

As was the case with our patient, definitive diagnosis of epidermal cyst may be confirmed by the histopathological demonstration of typical cyst circumscribed with keratinized stratified squamous epithelium [6].

4. Conclusion

Epidermoid cysts can occur in a variety of locations including the face, trunk, neck, extremities and scalp. Up to now, those

vulvar epidermal cysts reported in the literature were localized on the labia majora and the clitoris. This was the first case of an epidermal cyst reported on the labia minora. Epidermal cysts should be considered in the differential diagnosis of a vulvar mass.

Conflict of interest

All the authors declare that there is no conflict of interest.

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None.

Ethical approval

Written informed consent was obtained from the patient for publication of this case report and case series and accompanying images.

Author contributions

Mustafa Pehlivan contributed to study design, and Pelin Ozun Ozbay contributed to data collection; Muzaffer Temur and Ozgur Yilmaz contributed to writing and data analysis. Zekeriya Gümüş contributed to histopatologic examination. Ahmet Guzel joined the operative team as a urologist.

References

[1] N. Kirkham, Tumors and cysts of the epidermis, in: D.E. Elder, R. Elenitsas, B.L. Johnson, G.F. Murphy Jr (Eds.), Lever's Histopathology of the Skin, 9th ed., Lippincott Williams & Wilkins, Philadelphia, 2005, pp. 805–866.
[2] W.I.B. Onuigbo, Vulval epidermoid cyst in Igbos of Nigeria, Dermatology 112 (1976) 1405–1406.
[3] L. Pantanowitz, J.M. Henneberry, C.N. Otis, M. Zakhary, Adenolipoma of the external female genitalia, Int. J. Gynecol. Pathol. 27.2 (2008) 297–300.
[4] A. Schmidt, U. Lang, W. Kiess, Epidermal cyst of the clitoris: a rare cause of clitorimegaly, Eur. J. Obstet. Gynecol. Reprod. Biol. 87 (1999) 163–165.
[5] D. Linck, M.F. Hayes, Clitoral cyst as a cause of ambiguous genitalia, Obstet. Gynecol. 99 (2002) 963–966.
[6] G.L. Kroll, L. Miller, Vulvar epithelial inclusion cyst as a late complication of childhood female traditional genital surgery, Am. J. Obstet. Gynecol. 183 (2000) 509–510.
[7] S. Gupta, S. Gupta, V.K. Jain, Kumar Bhushan, A 'stone' in the vulva, Sex. Transm. Infect. 76.4 (2000) 319.
[8] O.D. Osifo, Post genital mutilation giant clitoral epidermoid inclusion cyst in Benin City, Nigeria, J. Pediatr. Adolesc. Gynecol. 23 (2010) 336–340.
[9] M.S. Schober, B.W. Hendrickson, S.A. Alpert, Spontaneous clitoral hood epidermal inclusion cyst mimicking clitoromegaly in a pediatric patient, Urology 84.1 (2014) 206–208.
[10] B. Lambert, Epidermoid cyst of the clitoris: a case report, J. Low. Genit. Tract. Dis. 15 (2011) 161–162.
[11] W.C. Yang, W.C. Huang, J.M. Yang, F.K. Lee, Successful management of a giant primary epidermoid cyst arising in the labia majora, Taiwan J. Obstet. Gynecol. 51.1 (2012) 112–114.
[12] M.R. Nucci, C.D. Fletcher, Liposarcoma (atypical lipomatous tumors) of the vulva: a clinicopathologic study of six cases, Int. J. Gynecol. Pathol. 17 (1998) 17–23.
[13] D. Isaacson, M.L. Turner, Localized vulvar syringomas, J. Am. Acad. Dermatol. 1 (1979) 352–356.
[14] R. Larrabee, D.J. Kylander, Benign vulvar disorders, Postgrad. Med. 109 (2001) 151–164.