Case Report

Clitoromegaly caused by cavernous hemangioma: A rare case report and review of the literature

Bita Geramizadeh, Mohammad-Hossein Anbardar, Saeed Shakeri[1]

Department of Pathology, Transplant Research Center, [1]Department of Urology, Shiraz University of Medical Sciences, Shiraz, Iran

Abstract

Hemangioma is a common benign neoplasm, but a location such as the clitoris is very rare. However, it is very important to differentiate clitoral hemangioma from enlargement of the clitoris secondary to androgen excess. To the best of our knowledge, only three cases of clitoromegaly caused by cavernous hemangioma have been reported in the English literature. Herein, we report our experience with a 16-year-old girl who presented with clitoromegaly and normal hormonal assay that turned out to be clitoral cavernous hemangioma after pathologic examination of the clitoral mass.

Key Words: Clitoromegaly, cavernous hemangioma, adolescent

Address for correspondence:
Prof. Bita Geramizadeh, Department of Pathology, Transplant Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
E-mail: geramib@sums.ac.ir
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INTRODUCTION

Cavernous hemangioma can occur in any site of the body.[1] It appears as a lobulated mass with purplish discoloration of the overlying skin.[2]

Cavernous hemangioma of clitoris is an extremely rare cause of clitoromegaly and, to the best of our knowledge, only three cases have been reported so far in the English literature.[3]

In this case report, we present our 16-year-old patient who presented with clitoromegaly and clitoral mass. The diagnosis of cavernous hemangioma was made after surgery and pathologic examination.

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CASE REPORT

A 16-year-old girl presented with clitoromegaly since birth. There was no significant finding in her family and past medical history.

Examination of her external genitalia showed an oval mass in the upper part of the urethra that seemed to be a clitoral mass measuring 45 mm × 40 mm.

Other parts were completely unremarkable. There was no virilizing sign or symptom. There was no clinical evidence of adrenal hyperplasia. Karyotyping was performed, which was normal and 46 XX.

Pelvic sonography showed normal uterus and ovaries for her age. There was a non-homogenous hypoechoic mass above the urethral orifice, which was probably clitoral hypertrophy [Figure 1].

Laboratory investigations, including complete blood count, electrolytes, coagulation profile and hormonal assay, were all unremarkable.

The decision was made to excise the mass. Under general anesthesia, a vertical incision was made above the mass. The

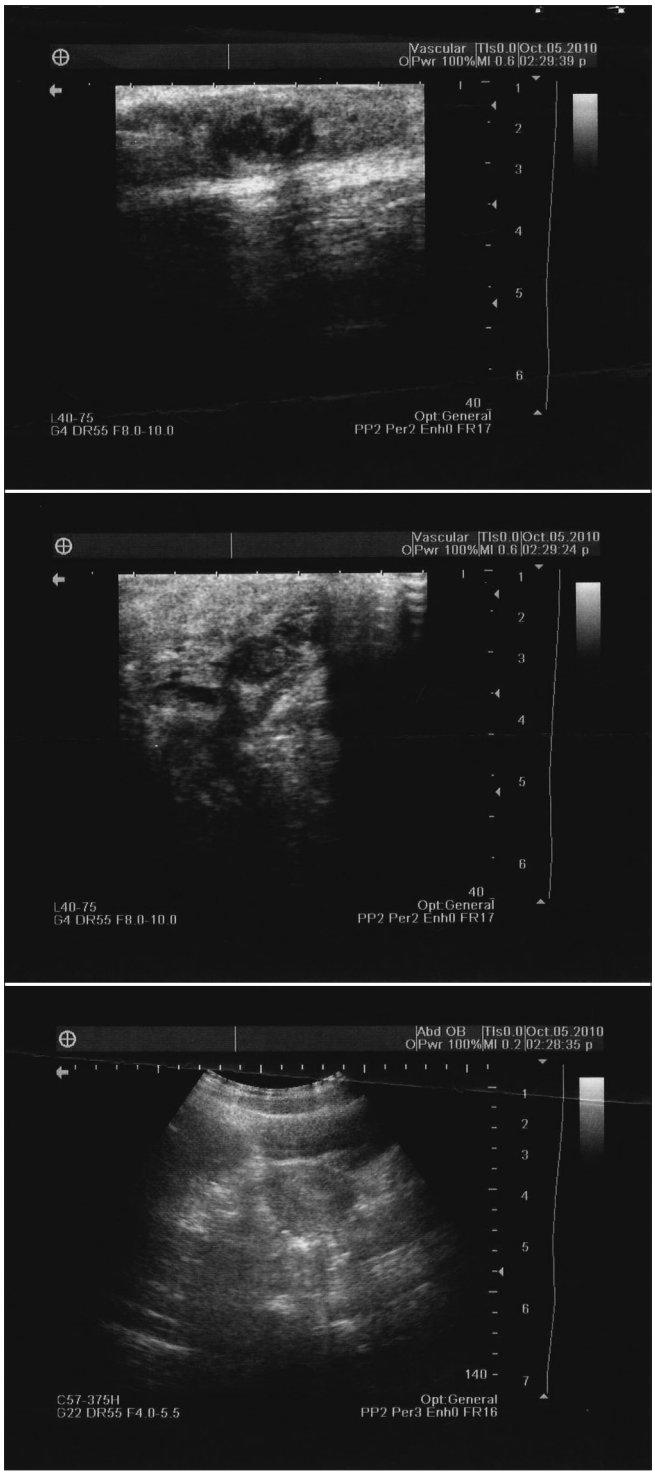

Figure 1: Sonography of the pelvis showing normal uterus and ovaries and a preurethral mass

mass was identified, released from the clitoris and completely excised.

Grossly, the mass was well-defined, gray-bluish, soft and compressible, measuring 45 mm × 40 mm × 20 mm. A cut-section of the mass revealed cystic spaces filled with blood.

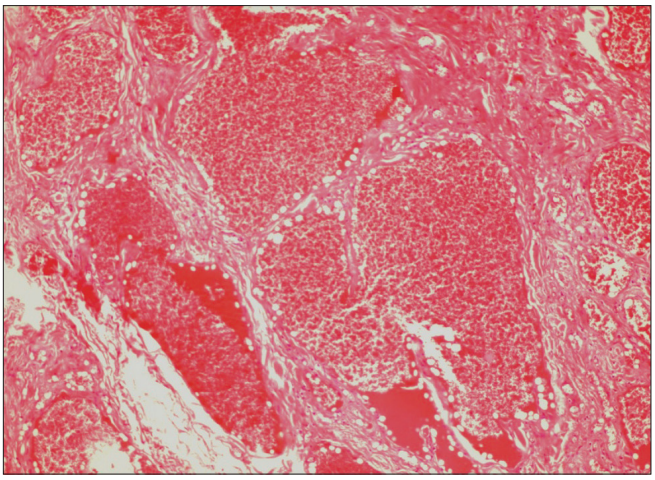

Figure 2: Sections from the clitoral mass showing cavernous hemangioma (Hematoxylin and Eosin, ×250)

Microscopically, the tumor was composed of large dilated blood filled vessels lined by flattened endothelium [Figure 2].

After excision of the mass, the patient was discharged in a good condition and now, after 3 months, she is doing well and is completely symptom-free.

DISCUSSION

Clitoromegaly is defined as a measure of the clitoral index (width × length in mm) more than 15 mm^2 in the new born and more than 21 mm^2 in an adult woman.[3]

It can be caused by congenital or acquired conditions; however, the most common cause of clitoromegaly is hormonal and is related to hyperandrogenism, but it can be very rarely caused by non-hormonal causes such as clitoral or prepucial masses.[4]

Non-hormonal causes of clitoromegaly are exceptionally rare, secondary to neurofibromatosis and epidermoid cysts, and even less common causes such as cystic lesions and abscess.[3,5]

Although hemangioma is a common neoplasm, clitoromegaly secondary to cavernous hemangioma is extremely rare and only three cases have previously been reported in the English literature.[1,3,4] All the reported cases have been observed in young and adolescent patients, and none of them have been diagnosed before pathologic examination of the mass [Table 1].

Herein, we report our experience in a 16-year-old girl referred with clitoromegaly whose biochemical and hormonal tests were all normal. Ultrasonography showed the mass and surgery revealed cavernous hemangioma after pathologic examination of the mass.

Table 1: Details of the reported clitoral hemangioma reported so far

	Age (years)	Presumptive diagnosis	Pathologic diagnosis
Kaufmann-Freidman[1]	18	Adrenogenital syndrome	Cavernous hemangioma
Haritharan *et al.*[4]	5	Upper external genitalia mass	Solitary vascular malformation
Bruni *et al.*[3]	20	Clitoral mass	Cavernous hemangioma
Current case	16	Clitoral mass	Cavernous hemangioma

In conclusion, non-hormonal causes of clitoromegaly, although rare, should be considered as important causes of clitoromegaly that precludes unnecessary treatment.

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