Case Report

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# Cavernous haemangioma mimicking as clitoral hypertrophy

**Sajid Nayyar, Naeem Liaqat, Nayyar Sultan, Sajid Hameed Dar**

## SUMMARY

Haemangioma is the most common benign neoplasm of infantile age. It is most commonly located in head and neck region, trunk and extremities but very rarely it can be located at clitoris. However, it is very important to differentiate clitoral haemangioma from enlargement of the clitoris secondary to androgen excess. Only four cases of clitoromegaly caused by cavernous haemangioma have been reported in the literature so far. Herein, we report our experience with a 10-year-old girl who presented with clitoromegaly and normal hormonal assay that turned out to be clitoral cavernous haemangioma after histopathological examination of the clitoral mass.

**Key words:** Adolescent, androgens, adrenal hyperplasia, clitoris, clitoromegaly, cavernous haemangioma

## INTRODUCTION

Cavernous haemangioma can occur at any site of the body.[1] It appears as a lobulated mass with purplish discolouration of the overlying skin.[2] Cavernous haemangioma of clitoris is an extremely rare cause of clitoromegaly and to the best of our knowledge only four cases have been reported so far in the literature.[3] In this case report, we present our 10-year-old female patient who presented with clitoromegaly and clitoral mass. She was explored for clitoral recession but the diagnosis of cavernous haemangioma was made per-operatively and confirmed histologically.

## CASE REPORT

A 10-year-old girl presented with clitoromegaly noticed by the family since birth. Rapid increase was noticed during the last 3 months. Her family history was not significant and there was no history of any medication. Examination of her external genitalia showed an elongated mass measuring 60 × 25 mm in size, above the urethral meatus, appearing as enlarged clitoris. Remaining examination was completely unremarkable. There were no signs or symptoms of virulisation. There was no clinical evidence of adrenal hyperplasia. Karyotyping was performed, which was normal and 46 XX. Pelvic ultrasonography showed normal uterus and ovaries for her age. There was a non-homogenous hypoechoic mass in the region of clitoris above the urethral orifice. Laboratory investigations, including complete blood count, coagulation profile, electrolytes and hormonal assay (17-OH Progesterone) were all unremarkable. The decision was made to excise the mass under general anaesthesia. After incision the mass was identified. The mass was surrounding and extending deep to the left of clitoris in the subcutaneous plan [Figure 1]. The mass was separable from clitoris, bluish in colour, soft and compressible, measuring 45 × 20 × 20 mm. It was separated from the clitoris and completely excised [Figure 2]. Her post-operative period was uneventful. Her biopsy report showed that the tumour was composed of fibro-collagenous and fibro-

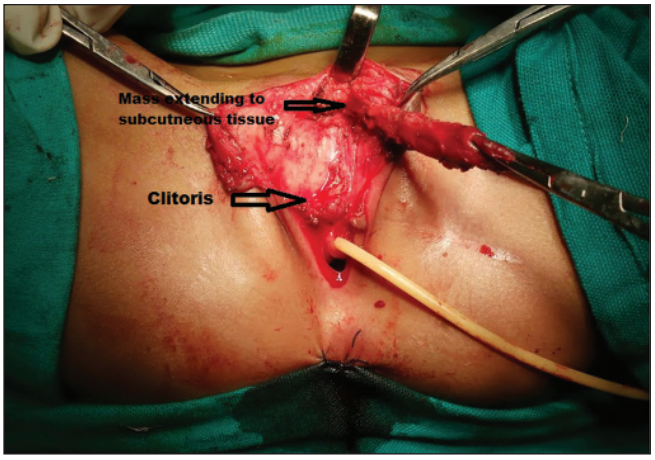



**Figure 1: Extension of mass during dissection**

Department of Paediatric Surgery, Services Hospital, Lahore, Pakistan

**Address for correspondence:**
Dr. Naeem Liaqat, Department of Paediatric Surgery, Services Hospital, Jail Road, Lahore, Pakistan.
E-mail: simsonian.chaudary@gmail.com




**Figure 2: Resected mass from clitoris**

vascular tissue with enlarged dilated blood vessels lined by flattened endothelium, confirming the diagnosis of cavernous haemangioma. She is in our follow-up 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.[1] 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.[2]

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.[1,3]

Haemangioma is benign tumour of endothelium and is the most common tumour of infancy. Its incidence is more common in white-skinned population and more common in females as compared to males (4:1). The median age of its presentation is 1-2 weeks. The most common location is head and neck, extremities and trunk but rarely it can involve genitalia and very rarely it can present as clitoromegaly.[4]

**Table 1: Details of the clitoral haemangioma cases reported so far (Courtesy of Geramizadeh B)**

| Author | Age (years) | Presumptive mass |
|---|---|---|
| Kaufmann-freidman | 18 | Adrenogenital syndrome |
| Haritharan *et al*., | 05 | Upper external genitalia mass |
| Bruni *et al*. | 20 | Clitoral mass |
| Bita Geramizadeh *et al*. | 16 | Clitoral mass |
| Current case | 10 | Clitoral mass |

Only four cases have previously been reported in the literature of cavernous haemangioma mimicking as clitoromegaly[1,5,6,7] All the reported cases have been observed in young and adolescent patients, and none of them have been diagnosed before pathological examination of the mass [Table 1].

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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