Infantile hemangioma of the clitoris presenting as a clitoral mass: A case report

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1. Introduction

Infantile hemangioma is a common benign vascular neoplasm characterized by endothelial cell proliferation. Hemangiomas are one of the most common tumors of infancy and typically present on the head, neck, trunk or extremities.1 There are currently no published cases of clitoral hemangiomas presenting in an infant. In our report, we will describe a five-month old female who presented with a clitoral mass, found to be a hemangioma with MRI and ultrasound imaging.

1.1. Case presentation

A five-month old female was admitted to the general pediatric inpatient service with fever, redness in the diaper area, and genital swelling diagnosed as acute cellulitis. The fever and redness were successfully treated with IV antibiotics, but the genital swelling persisted. The patient's mother stated that she first noticed the genital swelling when the patient was three months old and stated that she believed the swelling to be getting worse. The patient's past medical history was significant for pre-term birth at 24 weeks following a triplet pregnancy conceived via in vitro fertilization. Her neonatal period was complicated by respiratory distress syndrome resulting in chronic lung disease, and a patent ductus arteriosus treated via ligation.

On physical exam, the patient was well-appearing and her exam was remarkable for the large genital mass noted in the clitoral area. The mass was red, relatively soft, and measured 4 × 2 cm, replacing the clitoral head (Fig. 1). The remainder of the genital exam, vagina, labia, and perinium were normal.

MRI of the abdomen and pelvis identified a solid, T2-enhancing lesion that originated from the clitoral head and extended into the labia majora (Fig. 2). There was no lymphadenopathy and the remainder of the MRI, including uterus, cervix, vagina, ovaries, were normal. Ultrasound imaging demonstrated a homogeneous, solid mass with prominent vascularity involving the clitoris (not shown). Based on the clinical presentation and imaging of the mass, the patient was diagnosed with an infantile hemangioma. The patient was started on a trial of propranolol in lieu of immediate surgical intervention. Surgery was discussed as the next step in treatment if the patient did not respond to propranolol. The patient was subsequently lost to follow-up.

2. Discussion

Clitoromegaly is a rare condition often associated with androgen excess in disorders of sexual differentiation, usually congenital adrenal hyperplasia. Non-hormonal causes of clitoromegaly are rare and are commonly attributed to epidermoid cysts, neurofibromatosis, and rhabdomyosarcoma. To the authors knowledge, there have been six known cases of clitoromegaly due to hemangiomas described in the literature.2–4 In our case, ultrasound and MRI demonstrated a highly vascularized lesion that, combined with a large red mass on physical exam, was highly suggestive of an infantile hemangioma.

Infantile hemangiomas have a characteristic clinical course marked by early proliferation, stabilization, followed by spontaneous involution. The prevalence of infantile hemangiomas in mature neonates is around 4.5% with a female predominance (2.3–2.9:1).1 The prevalence increases with low birthweight and

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decreasing gestational age. Treatment of infantile hemangiomas is only recommended in complicated cases since these lesions tend to regress spontaneously. Since clitoral hemangiomas are located in the anogenital area, treatments aimed at the induction of growth arrest and remission are appropriate to avoid potential scarring and disfigurement.

Oral propranolol is the first-line treatment of choice for complicated infantile hemangiomas. Nearly 60% of infantile hemangiomas achieve complete regression with oral propranolol treatment and 96–98% of all cases have some type of response within 6 months of treatment initiation. Complicated infantile hemangiomas that are refractory to propranolol may be removed via surgical resection. Because hemangiomas usually expand the skin, skin grafts and local flaps are rarely needed and the wound can usually be reconstructed by linear closure.

3. Conclusion

Clitoromegaly is rarely due to non-hormonal causes such as hemangioma. In the past, surgical intervention has been suggested as the only appropriate therapy for clitoral hemangiomas. However, in the case of suspected infantile hemangioma of the clitoris, propranolol may be used as first-line treatment prior to the consideration of surgical intervention.

Conflict of interest

The authors have no conflicts of interest.

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References

1. Léauté-Labrèze C, Harper JI, Hoeger PH. Infantile haemangioma. Lancet Lond Engl. 2017;390(10089):85–94. http://dx.doi.org/10.1016/S0140-6736(16)00645-0.
2. Kaufman-Friedman K. Hemangioma of clitoris, confused with adrenogenital syndrome: case report. Plast Reconstr Surg. 1978;62(3):452–454.
3. Jesus LE, Camelier P, Bastos J, Tome ASM, Dekermacher S. Clitoral abnormalities in the absence of virilization: etiology and treatment strategies. Urolgy. 2016;88:170–172. http://dx.doi.org/10.1016/j.urology.2015.10.020.
4. Geramizadeh B, Anbardar M-H, Shakeri S. Clitoromegaly caused by cavernous hemangioma: a rare case report and review of the literature. Urol Ann. 2012;4(3):175–177. http://dx.doi.org/10.4103/0974-7796.102669.
5. Darrow DH, Greene AK, Mancini AJ, Nopper AJ. Diagnosis and management of infantile hemangioma: executive summary. Pediatrics. 2015;136(4):786–791. http://dx.doi.org/10.1542/peds.2015-2482.