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Inguinoscrotal hernia revealing a testicular hemangioma: Report of a neonatal case

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ABSTRACT

Testicular hemangioma (TH) is a congenital, uncommon and non-malignant testicular tumor. In the following report, we present a child who was brought to our emergency department with swelling of the right scrotum. Investigations were consistent with a TH and an associated hernia. We conducted an inguinal exploration given the hernia accompanying the TH. The pathological tissue findings were suggestive of a TH. In our further research, we found that this was the first neonatal hemangioma in the literature. It's important to know that an inguinal hernia can lead to the non-recognition of certain tumors.

1. Introduction

Testicular hemangiomas (TH) are unusual benign vascular neoplasms. TH can either arise from the adnexal structures of the testis (extratesticular), or within the testicular parenchyma (intratesticular).[1] The incidence of hemangiomas in the testis seems to be relatively rare, although they are frequently encountered in other organs of the organism.

Approximately 55 such patients have been reported in the literature so far.[2] Subsequently, in this article, we aimed to present a case of TH identified at the earliest age in the literature.

2. Case report

A 21-day-old newborn male applied to our emergency with a right inguinoscrotal hernia. He was the product of a full-term, spontaneous vaginal delivery. Clinical examination showed a large right inguinoscrotal hernia that was impulsive on crying and reduceable, the right testicle is in place but increased in size. His left testis had no apparent anomalies, nor did his epididymis or spermatic cord. We subsequently performed a scrotal Doppler ultrasound (USG) to evaluate any potential intra-scrotal defect. The USG showed a heterogeneous mass with a fatty and tissue component in the inferior pole of the right testicle, with both arterial and venous vascularization. The patient had the left testicular mass surgically removed (Fig. 1) along with a hernia repair through an inguinal incision. Pathologic examination confirmed an infantile hemangioma. The patient was released 4 days later, and has been free of any complications and has no recurrence after a 5-year follow-up.

3. Discussion

Hemangioma is a rarely encountered benign tumor of the testis.[2] This type of tumor can be diagnosed at any age, from the 17-week-old fetus up to patients aged 77. Although it progresses slowly, it can cause discomfort due to local pressure. Therefore, prompt diagnosis with proper management is required. In this case, we present a 21-day-old neonate with an inguinoscrotal hernia accompanying a TH. This is the earliest neonatal case reported in the literature. TH should be considered in testicular tumors, in addition to germ cell tumors, stromal tumors and sex cord tumors.[1] Ultrasound is a useful test for the diagnosis of hemangioma.[2,3] There are some characteristic sonographic features of TH, for instance, hypoechoic central part with hyperechoic findings.

Although the use of multiparametric ultrasound has been well documented for TH in recently years, it is not considered sufficient by itself, and both surgical exploration and histologic studies are compulsory for a final diagnosis.[2–4] Magnetic resonance imaging (MRI) is an important diagnostic aid for testicular tumors. However, MRI of a 21-day-old neonate requires general anesthesia. Yet, repeated applications of anesthesia can be toxic in infants.[2] Consequently, in the presence of a possible tumor that cannot be definitively excluded, the decision to proceed with surgical exploration is essential, while ensuring that the family is informed of potential treatment options. In our case,

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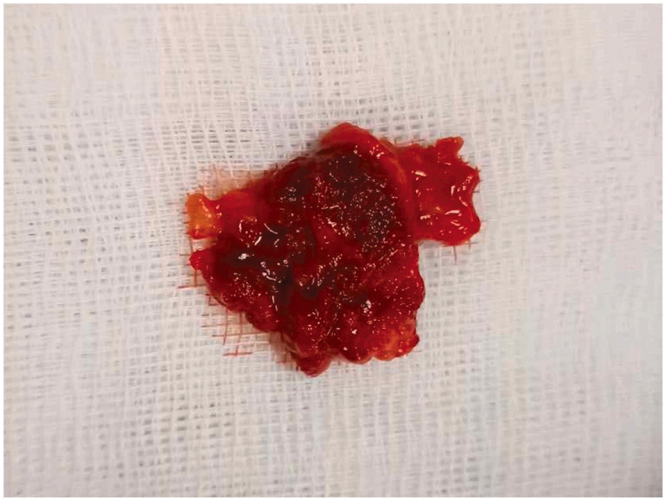

Fig. 1. The removed hemangioma.

the decision was to excise the tumor with preservation of the testis. According to the literature, propranolol can reduce hemangioma mass in infantile hemangiomas. The mechanism of its pathogenesis, though, has not been clearly established.[5] In reviewing studies on the prescription of propanolol in hemangiomas, no data are provided on its usage in testicular hemangiomas. In neonates and children, testicular preservation should be carefully performed and would influence their fertility, sexual function and psychology. Although it is a benign lesion, a long-term follow-up after surgery is important considering the possibility of local recurrence.[3]

4. Conclusions

We have reported the first case of neonatal TH in the literature. It is important to keep in mind that TH can also occur in infants. TH can be misdiagnosed as malignant testicular tumors. An accompanying inguinal hernia may lead to missing malignant lesions. A pathological examination is mandatory for a definitive diagnosis. It is essential to protect fertility in infancy. In this case, testicular sparing surgery is required.

References

1. Yu D, Lei Y. Testicular hemangioma: a case report. *Urology case reports*. 2018;16:20–21.
2. Kutsal C, Baloğlu İH, Albayrak AT. Hydrocele accompanying testicular cavernous hemangioma: a infant case report. *International journal of surgery case reports*. 2021;82, 105844.
3. Li F, Han S, Liu L, et al. Benign testicular cavernous hemangioma presenting with acute onset: a case report. *Molecular and clinical oncology*. 2020;13(1):19–22.
4. Spiesecke P, Fischer T, Stephan C, Maxeiner A, Hamm B, Lerchbaumer M. Multiparametric ultrasound (mpUS) of a rare testicular capillary hemangioma. *Case reports in radiology*. 2019;2019, 7568098.
5. Hagen R, Ghareeb E, Jalali O, Zinn Z. Infantile hemangiomas: what have we learned from propranolol? *Curr Opin Pediatr*. 2018;30(4):499–504.