

# Cavernous Hemangioma of the Scrotum Treated with Local Steroid: Case Report

## Lokal Steroid ile Tedavi Edilen Skrotumun Kavernöz Hemanjiyomu

Mustafa GÜNEŞ,<sup>a</sup>  
Muzaffer Oğuz KELEŞ,<sup>a</sup>  
Nesibe Sinem ÇILOĞLU,<sup>b</sup>  
Orhan KOCA,<sup>c</sup>  
Mehmet AKYÜZ<sup>a</sup>

Departments of  
<sup>a</sup>2<sup>nd</sup> Urology,

<sup>b</sup>Plastic and Reconstructive Surgery,  
Haydarpaşa Numune Training and  
Research Hospital,  
İstanbul

<sup>c</sup>Department of Urology,  
Çarsamba State Hospital,  
Samsun

Geliş Tarihi/Received: 25.03.2011  
Kabul Tarihi/Accepted: 10.10.2011

Yazışma Adresi/Correspondence:  
Muzaffer Oğuz KELEŞ  
Haydarpaşa Numune Training and  
Research Hospital,  
Department of 2<sup>nd</sup> Urology, İstanbul,  
TÜRKİYE/TURKEY  
muzafferoguzkeles@yahoo.com

**ABSTRACT** Hemangiomas are benign vascular lesions that can occur in any part of the body. Their etiology is controversial. Hemangiomas are self-limited and usually resolve spontaneously, therefore conservative treatment is generally recommended. However, genital hemangiomas may require surgical treatment if they become symptomatic. Intralesional steroid treatment is a simple and effective treatment with minimal side effects. Herein we report a 6 months old baby who presented to our clinic with hemangioma of scrotum.

**Key Words:** Hemangioma, cavernous; scrotum

**ÖZET** Hemanjiyomlar vücudun herhangi bir bölgesinde oluşabilen iyi huylu vasküler lezyonlardır. Etiyolojileri tartışmalıdır. Hemanjiyomlar kendilerini sınırlarlar ve genellikle spontan olarak düzülürler; bu nedenle genellikle konservatif şekilde tedavi edilirler. Ancak genital hemanjiyomlar semptomatik hale gelirse cerrahi tedavi gerekebilir. Lezyon içine steroid uygulaması, yan etkisi minimal düzeyde olan, basit ve etkili bir tedavi yöntemidir. Burada, skrotumun hemanjiyomu ile kliniğimize gönderilen 6 aylık bir bebek olgusu sunulmuştur.

**Anahtar Kelimeler:** Hemanjiyom, kavernöz; skrotum

**Türkiye Klinikleri J Med Sci 2013;33(1):241-3**

**H**emangiomas are benign vascular malformations of enlarged dysplastic vascular channels with abnormal growth of the endothelial cells. They are classified into capillary, cavernous, arteriovenous, venous and mixed subtypes.<sup>1</sup> Hemangiomas are the most common tumors of childhood and they are most common in the musculoskeletal system, liver and spleen.<sup>1</sup> Scrotal and penile hemangiomas are unusual entities. They comprise less than 1% of all hemangiomas and may extend into adjacent areas of the perineum.<sup>2</sup> Hemangiomas are characterized by 3 phases during their life cycle; the proliferating phase (0-1 year of age), the involuting phase (1 to 5 years of age), and the involuted phase (after 5 years of age).<sup>3</sup> They may be congenital or secondary to neoplasia and trauma. They exhibit a rapid postnatal growth and slow regression during childhood. Therefore, observational follow-up is generally recommended in asymptomatic hemangiomas. Genital hemangiomas may require earlier interventions because they are more prone to be symptomatic.<sup>4</sup>

doi: 10.5336/medsci.2011-23747

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## CASE REPORT

A 6 months old boy presented to our clinic with a scrotal lesion. He had been circumcised under local anesthesia when he was 6 days old. After the circumcision, a small purplish lesion had appeared on the anterior wall of the scrotum and had increased in size over time. On physical examination, there was a 4x3 cm, purplish, irregular, exophytic lesion located on the anterior wall of the scrotum. The lesion was ulcerated in the center (Figure 1). Results of laboratory studies including complete blood count, blood chemistry, and urinalysis were normal. Urine culture yielded no growth. Scrotal ultrasound showed a 4x3 cm lesion on the anterior wall of the scrotum, which resembled hemangioma with an extension of 1cm deep into the scrotum. The child was consulted with plastic surgery and a biopsy specimen was obtained, revealing hemangioma. Three doses of intralesional steroid Kenacort-A IM ret. 40 mg ampule (3 mg/kg) was given at 2-month intervals. The injections were done under mild sedation with a 26 G needle and low pressure to different areas of the lesion. Obvious involution was seen after 3 injections and 1 year of follow up (Figure 2).

## DISCUSSION

Hemangiomas are benign lesions characterized with proliferation of endothelial cells and enlarged dysplastic vascular channels. They can occur in any

part of the body and are the most prevalent vascular tumor of childhood, affecting 1-3% of neonates and 10% of children by the age of 1 year.<sup>5</sup> Hemangiomas of the external genitalia represent approximately 1% of all cutaneous hemangiomas and females are affected three to five times more frequently than males.<sup>6</sup> The etiology of hemangiomas is controversial. The lesions can be congenital or acquired. Hemangiomas were reported to be benign lesions without any malignant transformation.<sup>7</sup> Although hemangioma of the scrotum usually appears within the first two decades of life, it may develop at any age. Either site of the scrotum may be involved, and the lesion is usually unilateral.<sup>8</sup>

Only a few number of articles describing penile hemangioma have been reported. Froehner et al. described a giant penile cavernous hemangioma with intrapelvic extension.<sup>9</sup> Another case reported by Rastogi was an 18-year-old man with hemangioma of the penis, scrotum, perineum and rectum.<sup>1</sup> Penile hemangiomas are self-limiting in size. Although involution usually occurs at the age of six months to one and a half years, infrequently they can persist up to five years of age.<sup>10</sup> They are uncommon in adults because they usually disappear in childhood. Thirty percent of hemangiomas resolve by 3 years, half by 5 years and 70-90% by 7 years. The number of adult scrotal hemangioma cases are small in the literature. Ergun et al. reported a 44-



**FIGURE 1:** Scrotal hemangioma covering anterior wall of scrotum. (See for colored form <http://tipbilimleri.turkiyeklinikleri.com/>)



**FIGURE 2:** Appearance of scrotum after the first year of steroid treatment. (See for colored form <http://tipbilimleri.turkiyeklinikleri.com/>)

year-old male with large scrotal hemangioma.<sup>5</sup> Some hemangiomas do not completely involute and may require treatment once their final state of involution has occurred.<sup>4</sup> Since hemangiomas are self-limiting in size and tend to involute, most of these lesions can be followed conservatively with either observation alone or along with medical therapy. Hemangiomas of the genitalia which may require treatment are large, ulcerated lesions with secondary hemorrhage or infection. Various types of non-surgical treatments have been used. In 1967, Zarem and Edgerton reported use of oral prednisone with involution occurring rather quickly in 50-90% of these patients.<sup>11</sup> Intralesional steroid injections of methyl-prednisolone and triamcinolone/betamethasone have been used to induce resolution of hemangiomas. In 1978, Mazzola reported his experience with the treatment of rapidly enlarging mixed strawberry and cavernous haemangiomas in the head and neck area using steroids. Intralesional methyl-prednisolone injections 2 mg/kg body weight weekly for four weeks was the preferred methodology. Under normal conditions, the lesion is reduced dramatically after one course of treatment. In case of failure, a second course may be injected. Among the 11 cases presented in this report,

7 obtained an immediate benefit after 1 or maximum 2 courses. The remaining four cases underwent surgical excision after one course of failure.<sup>12</sup> In our case we applied three courses of steroid treatment and the lesion involuted dramatically. Sclerosing agents have been injected with poor results. Savoca et al. reported a case of a large hemangioma of the glans penis that had been treated by means of repeated injections of 2% polidocanol under local anesthesia.<sup>13</sup> Radiation was used in the past but is no longer recommended except for lesions with scarring, ulceration and malignant skin changes.<sup>14</sup> Genital hemangiomas may require surgical treatment if they become symptomatic. Wide local excision of the tumor with overlying skin appears to be the treatment of choice, since this prevents further increase in size, rupture or significant hemorrhage. Occasionally hemiscrotectomy and orchiectomy have been performed, but orchiectomy seems to be unnecessary unless the testis is involved.<sup>11</sup>

Hemangioma is a benign vascular lesion which usually involutes over time. Some will become symptomatic and require treatment. Different treatment options can be used for hemangiomas. Intralesional steroid treatment is a simple and effective treatment with minimal side effects.

## REFERENCES

- Rastogi R. Diffuse cavernous hemangioma of the penis, scrotum, perineum, and rectum--a rare tumor. *Saudi J Kidney Dis Transpl* 2008;19(4):614-8.
- Lin CY, Sun GH, Yu DS, Wu CJ, Chen HI, Chang SY. Intrasrotal hemangioma. *Arch Androl* 2002;48(4):259-65.
- Thorne CH. Vascular anomalies. In: Beasley RW, Aston SJ, Bartlett SP, Gurtner GC, Spear SL, eds. *Grabb and Smith's Plastic surgery*. 6th ed. New York: Lippincott Williams & Wilkins; 2006. p191-5.
- Alter GJ, Trengove-Jones G, Horton CE Jr. Hemangioma of penis and scrotum. *Urology* 1993;42(2):205-8.
- Ergün O, Ceylan BG, Armagan A, Kapucuoglu N, Ceyhan AM, Perk H. A giant scrotal cavernous hemangioma extending to the penis and perineum: a case report. *Kaohsiung J Med Sci* 2009;25(10):559-61.
- Mulliken JB, Fishman SJ, Burrows PE. Vascular anomalies. *Curr Probl Surg* 2000;37(8):517-84.
- Norouzi BB, Shanberg AM. Laser treatment of large cavernous hemangiomas of the penis. *J Urol* 1998;160(1):60-2.
- Ray B, Clark SS. Hemangioma of scrotum. *Urology* 1976;8(5):502-5.
- Froehner M, Tsatalpas P, Wirth MP. Giant penile cavernous hemangioma with intrapelvic extension. *Urology* 1999;53(2):414-5.
- Pasyk KA, Cherry GW, Grabb WC, Sasaki GH. Quantitative evaluation of mast cells in cellularly dynamic and adynamic vascular malformations. *Plast Reconstr Surg* 1984;73(1):69-77.
- Zarem HA, Edgerton MT. Induced resolution of cavernous hemangiomas following prednisolone therapy. *Plast Reconstr Surg* 1967;39(1):76-83.
- Mazzola RF. Treatment of hemangiomas in children by intralesional injections of steroids. *Chir Plast (Berlin)* 1978;4(3):161-71.
- Savoca G, De Stefani S, Buttazzi L, Gattuccio I, Trombetta C, Belgrano E. Sclerotherapy of hemangioma of the glans penis. *Urology* 2000;56(1):153.
- Order SE. Hemangioma and the risk/benefit ratio. *Int J Radiat Oncol Biol Phys* 1979;5(1):143-4.