

CASE REPORT

DOI: 10.5336/caserep.2022-91857

Venous Haemangioma on Neck

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ABSTRACT Hemangiomas are benign vascular tumors which present in the extremities, head, and neck typically. They can give rise to functional and cosmetic problems for patients. Pain is one of the most important symptoms. They can take place especially in extremities. The case is here presented of a 28-year-old female patient who presented with a smooth mass on the right side of the neck. The mass was operated on, and pathologically diagnosed as hemangioma. The surgical treatment was successful and satisfying cosmetically. It should be kept in mind that it is possible to encounter venous haemangioma with an anterior neck location.

Keywords: Hemangioma; neck; blood vessel tumor

Hemangiomas are benign vascular tumors. They are categorized histologically as capillary, cavernous, and venous. Both cavernous and venous hemangiomas contain large dilated vessels. However, the vascular channels in venous hemangiomas are characterized by thick fibrous walls containing smooth muscle. On the other hand, cavernous hemangiomas consist of thin-walled vascular spaces lined by flattened endothelial cells. The extremities, head, and neck are the most usual localisations. Various treatments have been discussed in literature such as surgery, medical therapy, sclerotherapy, and cryoablation in case of pain, organ dysfunction or cosmetic reason. The case is here reported of a patient with a venous hemangioma on the neck and the treatment applied.

CASE REPORT

A 28-year-old female patient was admitted to the hospital due to a smooth mass on the right side of the neck. The mass had been present since childhood and started to become more obvious at the age of 13 years. Throughout the adolescent growing period, the

mass continued to enlarge. During pregnancy the growth of the smooth mass accelerated reaching dimensions of 8×5 cm. The mass did not decrease in size after giving birth. The patient presented with aesthetic complaints and pain when bowing her head (Figure 1A,1B).

Physical examination showed the mass to be smooth and non-pulsatile. Doppler ultrasound showed that mass was a lobulated vascular malformation. Computed tomography revealed that it contained a lobulated venous mass. There was no sign of arterio-venous fistula (Figure 1C). Informed consent was taken from the patient.

Surgery was planned for both the cosmetic and pain symptoms. The patient was evaluated for cardiac pathology with echocardiography, and cranial computed tomography revealed no cerebral vascular pathology.

Under general anaesthesia, a skin incision was made anterior of the m. sternocleidomastoideus. The skin and m. platysma were very thin. After wide tissue dissection, 5 thick veins related to the v. jugularis

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Peer review under responsibility of Türkiye Klinikleri Journal of Case Reports.

Received: 09 Jun 2022

Accepted: 14 Sep 2022

Available online: 19 Sep 2022

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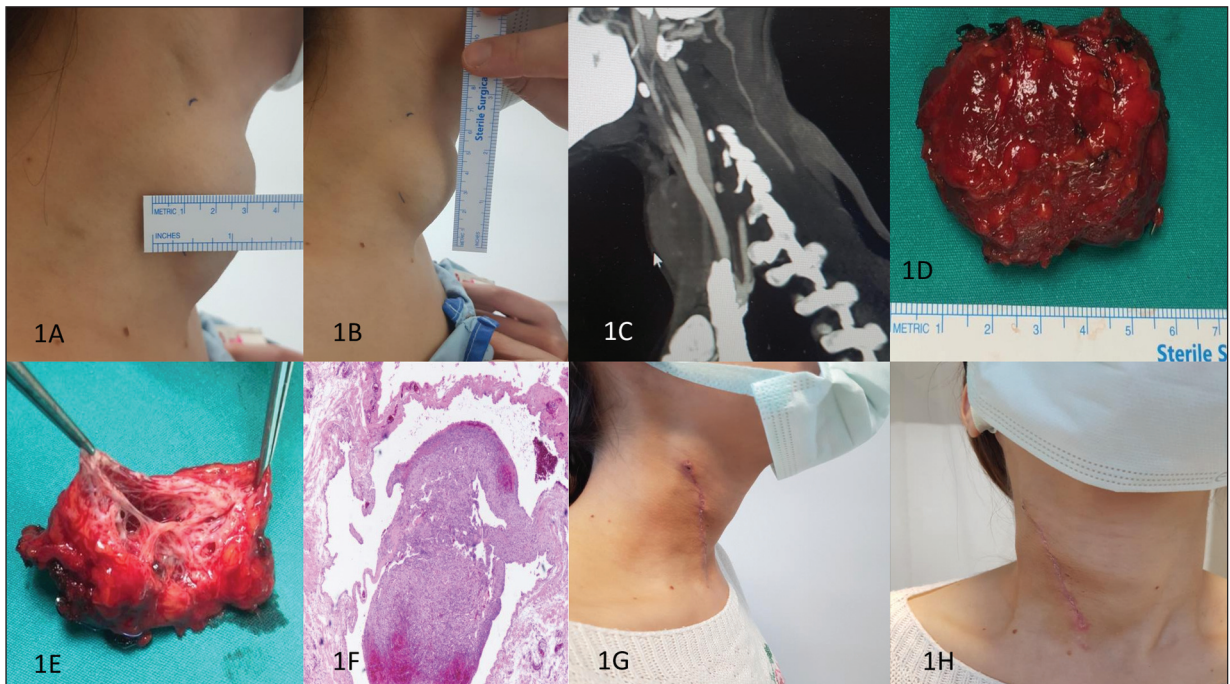


FIGURE 1: A, B: External view of the mass on neck, C: Computed tomography angiography images (hemangioma indicated by white arrow), D, E: Macroscopic view of hemangioma, F: Cavernous venous structures, stained with haematoxylin-eosine (x200), G, H: Postoperative view of the neck.

interna, v. jugularis externa, and v. throidea superior were seen to supply the venous hemangioma. Ligation of these supplying veins was performed, the smooth tissue wall was not very fragile and no obvious bleeding occurred. The mass was growing into the omohyoid muscle tissue. Macroscopically, there were seen to be many lobulations of the mass and thickening of the outer wall (Figure 1D, 1E). The postoperative pathological examination confirmed the diagnosis of venous hemangioma (Figure 1F). Postoperative follow-up was uneventful. The cosmetic result was satisfying enough for the patient (Figure 1G, 1H).

DISCUSSION

Hemangiomas are benign vascular tumours that present in infancy or in young ages with functional problems and undesirable appearance.¹ They are classified into capillary and cavernous or mixed types. They may cause pain, skeletal deformity, restricted extremity mobility. They are soft masses with blue discolorations of the skin.² Infantile hemangiomas are generally located in the head and neck, although they can be diagnosed in any body location, including organs, especially the liver.

Clinical diagnosis is possible in cases of superficial hemangioma, but for intramuscular and intraarticular lesions magnetic resonance imaging or computed tomography may be required to determine invasion to nearby tissue.¹ Hemangiomas are characterized by cellular proliferation, hyperplasia, and an accelerated proliferative stage in the beginning then involution on pathological examination.² Although it is known that hemangiomas can regress spontaneously and may be followed up without treatment, it is sometimes necessary to give medical treatment as the first choice and for cases that do not regress, surgical intervention can be applied in addition to medical treatment.³ Propranolol was found to provide satisfactory results in the treatment of hemangiomas.³ Propranolol is initiated 1 mg/kg/day up to 2-3 mg/kg/day administered in 2 or 3 doses.³ Many studies in literature have documented the effectiveness of propranolol treatment, generally in younger patients, but also for adults in a study Panditray et al.⁴ The success of propranolol usage in a 56-year-old patient with an hemangioma in fossa orbitalis has also been documented.⁴ Moreover, timolol maleate has been shown to be an effective treatment in the proliferative phase.³ Corticosteroid and sirolimus may be used

for refractive hemangiomas.³ Itraconazole or locally sclerosing agents such as sodium tetra decyl sulphate, ethanol, polidocanol, sodium morrhuate, OK432, and bleomycin can be used.^{1,4,5}

Generally, venous hemangiomas, can be resected using a transcervical approach. Bleeding often occurs during surgery due to the wide vascularity. After the pathology has been removed, the bleeding ceases. When surgery is impossible, the use of cryotherapy, feeding vessel ligation can be considered as alternative medical approaches.⁶ Scherer and Waner showed beneficial effects of Neodymium:yttrium aluminum garnet (Nd:YAG) laser therapy for venous malformations as an optional therapy in their series including 146 patients.⁷ Nd:YAG laser provides cell death and destruction of collagene with thermal effect.⁷

The mass in the current patient was similar to jugular vein ectasia due to its localization, slow growth, and accelerated enlargement during pregnancy. It should be kept in mind that it is possible to encounter venous haemangioma with an anterior neck location.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Hande İftar, Sabri Köseoğlu; **Design:** Hande İftar, Gökhan İlhan; **Control/Supervision:** Hande İftar, Gökhan İlhan; **Data Collection and/or Processing:** Hande İftar, Mürside Gülay Örgün Sönmez; **Analysis and/or Interpretation:** Hande İftar; **Literature Review:** Hande İftar; **Writing the Article:** Hande İftar; **Critical Review:** Gökhan İlhan; **References and Fundings:** Hande İftar; **Materials:** Mürside Gülay Örgün Sönmez.

REFERENCES

- Oktay BK, Kaçar AG, Özel SÇ, Ocak S, Celkan T. Clinical course of pediatric large vascular anomalies located in the extremities. *Turk Arch Pediatr.* 2021;56(3):213-8. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
- Madani H, Farrant J, Chhaya N, Anwar I, Marmery H, Platts A, et al. Peripheral limb vascular malformations: an update of appropriate imaging and treatment options of a challenging condition. *Br J Radiol.* 2015;88(1047):20140406. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
- Ricci KW. Advances in the medical management of vascular anomalies. *Semin Intervent Radiol.* 2017;34(3):239-49. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
- Panditray S, Acharya S, Prusty N, Dany SS. Management of head and neck hemangiomas in adults: oral propranolol versus oral itraconazole in conjugation with injection sodium tetra decyl sulphate. *Indian J Otolaryngol Head Neck Surg.* 2019;71(Suppl 1):566-73. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
- Sachin K, Rashmi S, Manish S, Siddhartha W, Uday L. Haemangiomas and venous malformations of the head and neck: A retrospective analysis of endovascular management in 358 patients. *Indian J Plast Surg.* 2013;46(1):109-16. [[PubMed](#)] [[PMC](#)]
- Cho JH, Joo YH, Kim MS, Sun DI. Venous hemangioma of parapharyngeal space with calcification. *Clin Exp Otorhinolaryngol.* 2011;4(4):207-9. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
- Scherer K, Waner M. Nd:YAG lasers (1,064 nm) in the treatment of venous malformations of the face and neck: challenges and benefits. *Lasers Med Sci.* 2007;22(2):119-26. [[Crossref](#)] [[PubMed](#)]