Hemangioma of Tongue: A Conservative Approach by Sclerotherapy- a Case Report

Monal Madhukar Kukde*, Pankaj Banode, Rahul R Bhowate

Introduction

Hemangiomas are the most common tumors of the head and neck region in infants and children. In oral cavity, tongue and floor of mouth are common sites [1]. Vascular malformations may be clinically apparent at birth, grow slowly, proportional to the growth of child (characterized by hypertrophy) and never involutes. Hemangiomas may be classified as capillary type which is superficial or cavernous type which is deeper. As most hemangiomas undergo involutions, hence management often consists of watchful neglect. We report a 9 year old female with hemangioma of dorsum of tongue and use of sclerotherapy which is a simple, non deforming method of eliminating or significantly reducing small to moderate size vascular lesions as a treatment modality.

Case Report:

A healthy 9 year old female child was reported to the department of oral medicine and radiology with a small swelling about 1 x 1.5 cm in diameter, bluish purple in colour, smooth surface, non-tender, compressible and present on right anterior one third dorsal aspect of tongue [Fig.1]. No pulsations were felt over the swelling.

Patient's mother gave history of presence of gradually increasing swelling since birth. There was no history of difficulty in speech and mastication, any secretion or blood discharge from the swelling. Diascopy was positive for the swelling. Ultra Sonography showed a hyperechoic mass of size approx. 1.5 x 1.5 cm in diameter present on the same location. Swelling was superficial (low flow), cannot be readily emptied, consists of masses of proliferating vessels of capillary dimension, no deeper artery was involved with the swelling and spontaneously involutes suggestive of Capillary hemangioma of tongue [Fig.2].

After a week of clinical diagnosis, USG guided sclerotherapy was done. Sodium Tetra decyl sulphate (66 %) 2 ml, mixed with lipoidal solution (1 ml) which is a fat soluble contrast, given slowly intralesionally. Care was taken to prevent extravasation of sclerosant. Post treatment local ice pack compression was given to control burning pain for half hour.

Patient was kept nil by mouth for 2 hours postoperatively and instructed to avoid scratching or biting of tongue. Post sclerotherapy, antibiotic [Cap. Augmentin Duo 625 (Amoxicillin 500 + clovulonic acid 125), (GlaxoSmithKline,Ireland, Ltd)] for 3 days, anti-inflammatory [Tab CombiFlam (Ibuprofen400 + Paracetamol 325), (Aventis Pharma Ltd, Bangalore, India ) for 3 days, and H2 antagonist[Tab. Rantac (Ranitidine 150) (Unique Pharmaceutical lab , India)] for 3 days were given. 3 days of post injection the swelling underwent significant shrinkage. 15 days post injection the lesion had completely disappeared, leaving a normal appearing anterior one third dorsal aspect of tongue right side [fig.3].

Fig 1: Clinical photograph showed bluish discoloration of 1 x 1.5cm on dorsal anterior one third of tongue.
Fig 2: Ultrasound showed hyperechoic mass about 1.5x1.5 cm in size.

Fig 3: Post sclerotherapy clinical photograph showed resolution of lesion

Discussion:

The hemangioma is a basically a benign tumor of patent blood vessels which could be congenital or traumatic in origin, formed by an increased number of blood vessels. The prevalence of hemangioma of tongue is 0.8% (Males 1.1 % and Females 0.6%) [2]. A total of 73% of hemangiomas occur within the first year of life. The most common location is head and neck, which accounts for 60% of all cases. About 80% of hemangiomas occur as a single lesion, but 20% of the affected patients will have multiple tumors [3].

On clinical examination if the lesion is soft and easily compressible, diascopy is one of the best chair side investigations for evaluation. Diascopy is the technique of applying pressure to a suspected vascular lesion to visualize the evacuation of coloration and may facilitate the differentiation of a small vascular lesion from a pigmented lesion. [4]

In order to identify the precise anatomic location and depth of tissue extent is warranted before treatment, various radiological investigation modalities should be taken into consideration. Ultrasonography may differentiate low – flow from high – flow lesions. The real advantage to ultrasound guided sclerotherapy is to identify and close all of the tributary veins causing reflux back into failed veins. [5]

Most lingual tumors present as mucosal changes and tongue being superficially located and easily accessed, these can be diagnosed without imaging analysis. However, the characteristic and extent of lesions situated at deep portion of tongue, such as its base or submucosal lesions can be recognized only on crosssectional CT scan or MRI. Hemangiomas usually appear as a well-demarcated enhancing mass often containing phlebolith on CT scan. MRI shows the lesion as a solid mass with isointense or slightly high signal intensity to muscle on T1-weighted imaging commonly demonstrates prominent enhancement [6]. The treatment modalities (alone or in combinations) include superselective intra-arterial embolization (SIAE), Sclerotherapy, Radiotherapy, or surgical excision / resection using electrocaulation, cryosurgery, or laser surgery [4].

Surgical resection is not commonly indicated during infancy. In some cases systemic corticosteroids may help to reduce the size of lesions. Hemangiomas that are unresponsive to corticosteroid can be treated with interferon-α-2a, but the probable side effects include fever, malaise, leucopenia, interstitial nephritis, and hemolytic anemia [7].

Sclerotherapy is an internationally proven treatment method where an extremely fine needle about 26 gauge is used to inject a special solution directly into the unwanted abnormal vein. This solution causes the vein wall to collapse, which then disappears gradually as the body absorbs it. However various authors [8,9] believes that this approach presents a simple, slightly invasive, and non deforming method of eliminating or significantly reducing small to moderate size vascular lesions in infants and children. Sodium Tetra decyl sulphate, because of its effectiveness and minimal local and systemic effects, is recommended as the agent of choice for this method. Sclerosing solutions are injected into the lesion to induce inflammation and the formation of fibrous tissue, which scleroses and shrink the vascular space [8, 10]. Sclerosing agents are often used before surgery to reduce the amount of surgery needed and to reduce hemorrhage [10]. The smaller lesions disappear after injection, whereas the larger lesions require up to biweekly treatments [8]. The rare adverse reaction may occur like allergy to sclerosing agent, bruise and ulcer at injection site. The sclerotherapy is, virtually painless, is extremely safe, has very few complications and is a walk in, walk out procedure with costs about half of surgery.

The disadvantages of using other agents like 2.5 % sodium morrhuate is that it stimulates granulocytes and damages erythrocytes and endothelial cells and the other is 0.5% Ethanolamine oleate produced immediate clinical and histological endothelial damage and thrombosis [11].

Conclusion:

Small and uncomplicated hemangiomas in children can be managed conservatively. The sodium tetradeyl sulphate is safe compare to other Sclerosing agent in small sized intraoral hemangioma.

Acknowledgement:

I sincerely thankful to the Dept of TIFAC-CORE in Interventional Radiology, supported by TIFAC, Dept. of Science & Technology Govt. of India.

References


