

## Case Report

### Management of Hemangiomas using Intra Lesional Corticosteroids- Case report of two cases

Tajinder Bansal<sup>1</sup>, Ruchika Bansal<sup>2</sup>, Jethender Reddy Kubbi<sup>3</sup>, Satvinder Singh<sup>4</sup>, Rajesh Gupta<sup>1</sup>, Irfana Khurasheed<sup>5</sup>

Department of <sup>1</sup>Oral Medicine and Radiology, <sup>2</sup>Conservative and Endodontics Swami Devi Dyal Hospital and Dental College, Barwala, Panchkula, <sup>3</sup>Oral Medicine and Radiology, SVS Institute of Dental Sciences, Mahabubnagar, AP, <sup>4</sup>Oral Medicine and Radiology Jammu & Kashmir, <sup>5</sup>Department of Dentistry, Shere Kashmir Institute of Medical Sciences, Srinagar.

#### Corresponding Author:

Dr Ruchika Bansal,  
Assistant Professor ,  
Dept. of Conservative & Endodontics  
Swami Devi Dyal Hospital and  
Dental College  
E-mail: ruchee81g@gmail.com

**Received:** 02-07-2014

**Revised:** 22-07-2014

**Accepted:** 26-07-2014

#### Abstract:

Hemangiomas are the most common tumours of infancy, occurring in 5% to 10% of 1-year old children. They are much more common in females than males, and they occur more frequently in whites than in other racial groups. The most common location is the head and neck, which accounts for 60% of all cases. Eighty percent of hemangiomas occur as single lesions, but 20% of affected patients will have multiple tumours. Most hemangiomas of the tongue are asymptomatic; they could sometimes cause significant bleeding, pain or difficulty in chewing, speaking and swallowing. Here we report of two case of hemangioma of the tongue treated with Sodium Tetracycl Sulfate.

Keywords: Oral Hemangiomas, Childhood Tumours, Sodium Tetracycl Sulfate.

This article may be cited as: Bansal T, Bansal R, Kubbi JR, Singh S, Gupta R, Khurasheed I. Management of Hemangiomas using Intra Lesional Corticosteroids- Case report of two cases. J Adv Med Dent Scie Res 2014;2(3):171-176.

#### Introduction:

Hemangiomas are the most common congenital lesions in humans and represent the most frequent benign tumor in infants and children. 75% of hemangiomas are present at birth, whereas 85% by the age of 1 year. Although the head and neck region represents only 14% of the body surface area, 65% of hemangiomas arise in this location. Despite the frequency of these tumors, their pathogenesis is not completely understood. Clinically, cavernous hemangiomas are discolored lesions.<sup>1</sup> They are typically soft, poorly defined, and readily blanch with

compression. They have been likened to a "bag of worms." The lesion may expand and darken with crying, agitation, or placement in a dependent position. Although uncommon in the head and neck, it has a predilection for the parotid gland, tongue, and larynx and rarely in other structures such as the mandible.<sup>2</sup> Histologically, cavernous hemangiomas are composed of a great number of large vascular channels lined with one layer of endothelial cells separated by fibrous septae. This article highlights two cases of cavernous Hemangioma reported in

the department, with the efficacy of intralesional sclerosing agents used as treatment modalities for the hemangiomas of head and neck region.

### Case Report

#### Case 1:

A 70 years old female patient reported to the Department of Oral Medicine and Radiology, Swami Devi Dayal Dental College and Hospital, Barwala with a complaint of swellings on the dorsal & ventral surface of tongue, left chin region, left parotid region. Patient gives history of persistent swellings from childhood. Patient also gives history of breathlessness in lying down position & difficulty in swallowing food. No history of rupture or any drainage. Patient visited to local doctor for the same complaint & they referred to department of oral medicine & radiology of our college. Patient was asthmatic from 10 years & she was under medication (Salbutamol). Extra-oral examination revealed solitary swelling about 2.5 cm in maximum dimension on left side of chin (Figure 1).



**Figure 1:** Swelling on left parotid region and left side of chin

Another solitary swelling about 3cm in diameter was present on left parotid region extending Superioinferiorly from line joining the ala of nose and tragus of ear to inferior border of the mandible (Figure 1). Anterioposteriorly 3cm from left corner of mouth to posterior border of ramus of mandible. Overlying skin was smooth & bluish in color. On palpation, swellings were

pulsatile and fixed to underlying tissue. Turkey Wattle Sign was present (Figure 1). (The turkey wattle sign describes enlargement of a facial mass on dependency of the head and when the sign is present it is pathognomonic of a vascular malformation or haemangioma). Swellings were non fluctuant, non tender with no discharge through the swelling. Left Submental & Submandibular lymphadenopathy was present. Intraoral examination revealed multilobed swelling measuring about 4X3 cm in maximum dimension present on left side and anterior two- third of dorsal surface of tongue (Figure 2a).



**Figure 2a & 2b:** Swelling on dorsal & ventral surface of tongue

On ventral surface of tongue, a solitary swelling about 2cm in maximum diameter was present extending medially from lingual frenum to 2cm towards the left border of tongue (Figure 2b). Overlying surface was bluish red in color and smooth. On palpation, swelling was pulsatile, non tender, non fluctuant and no blood or pus discharge. Based upon history and clinical examination, provisional diagnosis of Hemangioma of dorsum, ventral surface of tongue, chin and left parotid region was given. The differential diagnosis of A.V malformation and lymphangioma was considered. Blood investigations were within normal limits. OPG revealed edentulous upper and lower arches. Multiple phleboliths were seen on left ramus of mandible (Fig. 3)



**Figure 3:** Orthopantomograph showing phleboliths on left ramus of Mandible

Ultrasonography showed highly vascular hypoechoic mass in subcutaneous plane in left side of chin, parotid region within the parotid gland (involving the deep lobe) & ventral & dorsal surface of tongue. Submental & Submandibular lymphadenopathy was present (Figure 4a,b,c).



**Figure 4(a, b and c):** Ultrasonography showed highly vascular hypoechoic mass chin, parotid gland & ventral & dorsal surface of tongue.

Based upon radiological investigation, final diagnosis of vascular malformation [Venous Hemangioma] of dorsal & ventral surface of tongue, Left chin region and deep lobe of parotid gland was given.

Local injections of a sclerosing agent (3% Setrol - sodium tetradecyl sulfate) 1ml mixed with lignocaine HCl were given in the lesion once a week for 8 weeks on recall visits. No side effects were noticed and the lesions regressed without scarring (Figure 5a, 5b).



**Figure 5(a, b):** Post treatment

**Case 2:**

A 49 years old male patient reported to the department with a complaint of swellings in upper right lip from past 30 years. Swelling was of peanut size initially. Patient gives history of trauma when he was of 20 year; later on the swelling gradually started increasing in its size and attained the present size. On examination, a solitary swelling about 2X3 cm in maximum dimension was present on right side of upper lip extending from midline to right lip commissure (Figure 6).



**Figure 6:** Swelling on right side of upper lip

Overlying mucosa was bluish, red in color and smooth. Swelling was pulsatile, non fluctuant, non tender with no blood or pus discharge. Based upon history and clinical findings, provisional diagnosis of hemangioma of upper right lip was made. Ultrasonographically, small hypo echoic mass was noted in upper lip on right side (Figure 7).



**Figure 7:** Ultrasonograph showing hyperechoic masses in upper lip

Final diagnosis of vascular malformation (Cavernous Hemangioma) in right upper lip was given. Patient was locally given 1ml of sclerosing agent (3% Setrol - sodium tetradecyl sulfate) mixed with lignocaine HCl once a week for 4 weeks on recall visits. No side effects were noticed and the lesions regressed without scarring (Figure 8).



**Figure 8:** Post treatment

### Discussion

Hemangiomas are considered to be developmental malformations or hamartomas rather than true neoplasms. 50% of all

hemangiomas occurs in the head & neck region, with the tongue, buccal mucosa, lips & palate most commonly involved. In our cases, they were present on tongue and upper lip. The reported incidence of hemangiomas in females is much greater than in males (3:1).<sup>3,4</sup> The clinical appearance of these lesions is inconsistent; the size ranges from pin-point to several centimeters in diameter; color ranges from bright red to purple, & the position ranges from deep to superficial. The surface can appear either flat or a raised nodular mass.<sup>5</sup>

Usually arising during childhood, it may continue to extend either continuously or intermittently throughout adult life. Approximately 55 % of these tumors are present at birth, and the remainder develops in the first weeks of life. The most accepted classification system is based on the histologic appearance of the vessels and includes the following subtypes: capillary, cavernous, venous, arterio-venous, and mixed.<sup>6</sup> Clinical manifestations may include pain, the presence of a mass, soft tissue swelling, subcutaneous discolorations, and less frequently, neurologic symptoms secondary to impingement of a nerve bundle. These symptoms may be present for years before a diagnosis is made. Superficial soft tissue hemangiomas have a predilection for the head and neck while deep-seated hemangiomas appear more frequently in the trunk and lower extremities. Hemangiomas do not metastasize, but rather proliferate or involute with time.<sup>7</sup>

Conventional radiography of the affected area is usually the initial diagnostic study obtained in patients suspected of having a soft tissue mass and will often reveal an ill defined soft tissue prominence or mass. In many cases, the radiographs are normal. However, the other major soft tissue finding is phleboliths, which can occur in 20% to 67% of cases. Even in our first case, multiple

phleboliths were present on left ramus of mandible. Other diagnostic imaging includes ultrasonography with Doppler study, computed tomographic scan and magnetic resonance imaging.<sup>8</sup> The definitive diagnosis is determined by biopsy.

Treatment options for hemangioma include cryotherapy, radiotherapy, injection of sclerosing agents, and corticosteroids.<sup>9</sup> Treatment depends on the location, size, age of the patient, the presence or likelihood of complications, the availability of certain treatments (such as laser therapy), the expertise of the treating physician, parental preference, and subtype of the soft tissue hemangioma. Indications for therapy include acceleration of tumor growth, uncontrollable pain, gross functional impairment, local skin necrosis, thrombocytopenia, cosmetic deformity, and suspicion of malignancy. Superficial capillary hemangiomas are often treated conservatively as their natural history is involution with time. Embolization and/or injections of sclerosing agents have produced variable results depending on the extent of the communication between the lesional vascular tissue and the systemic circulation. Sclerotherapy has been used in the management of hemangioma for more than 100 years.<sup>10</sup> Different sclerosing agents have been used with varying degree of success such as sodium tetradecylsulphate, sodium morrhuate, sodium citrate, invert Sugar, boiling water, sodium psylliate.

#### **Mechanism of action**

It causes- Localized inflammatory reaction, Obliterative thrombosis of hemangiomatous space, Subsequent fibrosis of the endothelial spaces, Regression of the lesion without affecting the bone. Advantages of Sclerosing agent is that it is simple and inexpensive, no loss of blood, no hospitalization is required, sclerosing solutions are readily available & can be kept in office. Disadvantages are post-

operative pain & burning sensation, anaphylactic reaction, tissue necrosis and sloughing [4%], temporary myoglobinuria [2%] and airway compromise [1%].<sup>8</sup>

A trial of oral steroids is now the preferred treatment for skin hemangiomas requiring intervention, such as rapidly growing facial lesions causing disfigurement, and radiation therapy is reserved for lesions that threaten function or life and have failed alternative therapies. Radiotherapy of deep symptomatic hemangiomas has a disappointingly high incidence of persistence/ recurrence and is only advisable when the lesion is disabling or is surgically.

For deep-seated soft tissue hemangiomas, however, wide local excision is the optimal management in order to prevent recurrence. In cases of incomplete excision, there is an 18% risk of recurrence.<sup>11</sup> Systemic corticosteroids can decrease the bulk of the tumor, and these drugs can also be injected into the tumor, (Rossiter et al. 1993). In cases that fail to respond to corticosteroids, interferon  $\alpha$ -2a and 2b can be used. However, this may cause irreversible spastic diplegia in 20% of cases.

#### **Conclusion**

Hemangioma can best treated with sclerosing agent with better patient compliance & therefore sclerotherapy proved to be an effective and conservative technique for the treatment of benign vascular lesions.

#### **References**

1. Daniel T. Boll et al. Low-Flow Vascular Malformations:MR-guided Percutaneous Sclerotherapy in Qualitative and Quantitative Assessment of Therapy and Outcome. Supplemental material :radiology.rsnajnl.org/cgi/content/full/2332031213/DC1.
2. E.H.M Hartman et al. Surgical treatment of Hemangioma and vascular

- malformations in functional areas. *Pediatr. Surg Ing* (1996) 11:308-311.
3. Fatih et al. Unusual Presentation of Cavernous Hemangioma in the Palatine Tonsil. *Düzce Tıp Fakültesi Dergisi* 2004; 2: 34- 36.
  4. Hideki Hyodoh et al. Peripheral Vascular Malformations: Imaging, Treatment Approaches, and Therapeutic Issues. *RadioGraphics* 2005; 25:S159–S171.
  5. Jonathan S.Lewin. et al. Low flow Vascular Malformation in the head and neck safety and feasibility of MR Imaging-guided percutaneous sclerotherapy.Preliminary experience with 14 procedures in three patients. *Radiology* 1999;2(11):566-570.
  6. M. Vakilha et al. Intramuscular hemangioma of the forearm; Report of a case. *Iran. J. Radiat. Res.*, 2003; 1(3): 175 – 179.
  7. Saeed WR et al. The 'turkey wattle' sign revisited: diagnosing parotid vascular malformations in the adult. *Br J Plast Surg* 1997 Jan; 51(1):43-46.
  8. Stefan Puig et al. Double-Needle Sclerotherapy of Lymphangiomas and Venous Angiomas in Children: A Simple Technique to Prevent Complications. *AJR*: 180, May 2003.
  9. Tarik Ladif et al. Intralesional Steroid Therapy of Hemangioma.
  10. Thomas Shpitzer et al. Noncutaneous Cavernous Hemangioma of the Head and Neck. *American journal of otolaryngology* vol 18, No 6 (November-December), 1997: pp 367-674.
  11. Vakilha et al, Intramuscular hemangioma of the forearm; Report of a case, *Iran. J. Radiat. Res.*, 2003; 1(3): 175



Source of support: Nil

Conflict of interest: None declared