Vanessa Marino. Pathology. Central Hemangioma

a. Brief explanation of the disease/lesion - Central hemangioma is a benign tumor of endothelial cells. It is characterized by the proliferation of blood vessels. The proliferation of blood vessels creates a mass resembling a neoplasm. One thing I kept seeing is that it is very rare to develop in the jaws and accounts for 1% of all primary bone tumors. It is most frequently found in the vertebrae and the skull.

b. Etiology - Central hemangioma develop when there is an abnormal proliferation of blood vessels. There is no known cause as to why this happens.

c. Clinical presentation (Objective and Subjective) - Bluish discoloration, gingival bleeding, post extraction bleeding, swelling, pain, mobility of the teeth, root resorption and bony expansion with pulsation being heard.

d. Age/Sex/Race- Most often in the first 3 decades, mostly females and they are diagnosed in caucasians more frequently althought most of my case studies I found were out of India.

e. Biopsy/Lab tests/Radiographs: proliferating mass of endothelial cells forming an arrangement of vascular spaces. A biopsy is not done on a routine basis due to a higher risk of hemorrhage. Radiographically they are multilocular radiolucency in the posterior ramus of the mandible, and can have a sunburst or bitten root appearance.

f. Treatment - Management of central hemangioma is difficult because of the vascularity of it. Treatment of central hemangioma in the mandible can be achieved by surgery, radiotherapy, complete curettage, sclerosing agents, resection with reconstruction and embolization. To reduce the risk of bleeding, they may tie off the inferior alveolar artery during surgery.

g. Prognosis with and without treatment depending on the area - When seeing a lesion clinically or radiographically it is important to try to get an early diagnosis of central hemangioma, as to prevent uncontrollable hemorrhage or death during biopsy or surgery. Once this is done then most resources say that usually asymptomatic hemangiomas or minimal facial deformity are not vigorously treated and mostly watched over time. Treatment would be indicated when there is an aesthetic disfigurement, or repetitive bleeding and a palpable mass. If there was a large area where a hemangioma was that was compromising the bone and teeth, then, not treating it can lead to continued bone expansion and loss of teeth which then will be needed to be treated by resection.

h. Differential Diagnosis (what can this be confused with) - It is very difficult to diagnose. Some differential diagnosis are ameloblastoma, residual cyst, aneurismatic bone cyst, myxoma, central giant cell granuloma, and fibrous dysplasia

i. Why this disease/Lesion is relevant to you as a Dental Hygienist- We need to know what these are and what the variants of normal are. We have to, for example, understand if a patient is just bleeding normally after an extraction or that is due to a hemangioma. Prior knowledge can assist us in seeing the signs radiologically and clinically so we can help to refer the patient out to get the proper treatment needed and to avoid any catastrophic outcomes.

References :

- Jain, Sandeep, Sasidhar Singaraju, and Medhini Singaraju. "Central hemangioma: A case report and review of literature." Journal of Indian Society of Pedodontics and Preventive Dentistry 34.1 (2016): 87.

- Thankappan S, Thomas V, Kumar NR, Sharafudeen K P, Nair S. Central hemangioma of mandible presenting as massive radiolucency. J Indian Acad Oral Med Radiol 2009;21:42-5
- Mitra, Debasmita, et al. "Central capillary hemangioma of the maxilla: Case report and a review of the literature." The Saudi Journal for Dental Research 7.1 (2016): 64-68.
- Dhiman, Neeraj Kumar, et al. "Central cavernous hemangioma of mandible: Case report and review of literature." National journal of maxillofacial surgery 6.2 (2015): 209.