Clinical History:

A 21-year-old female patient complained of swelling of the right cheek for 2 years, progressively increasing in size and causing facial asymmetry. On examination, a bluish-purple swelling was visible intraorally.

Imaging Findings:

CT shows a well-defined minimally enhancing heterogeneous lesion measuring 2.3x1.2x3.0 cm in size with a few hyperdense foci (calcifications) noted in the submucosal plane of the right buccal mucosa. Serpiginous enhancing channels are seen within it. The lesion abuts the overlying skin and the ipsilateral orbicularis oris muscle.

Discussion:

Haemangiomas are the most common benign tumours of infancy and childhood [1, 2]. They are also referred to as arteriovenous aneurysms, cavernous haemangioma, central haemangioma, pulsatile haemangioma, angioma, arteriovenous shunts and arteriovenous malformations with low flow [1]. Haemangiomas generally become conspicuous within the first month of life, exhibit a rapid proliferative phase and involute slowly [2]. Being the commonest soft tissue tumour of the head and neck, haemangiomas fall into a number of subtypes; cutaneous type involving skin, lips and deeper structures, mucosal type involving the lining of the oral cavity, intramuscular, involving masticator and perioral muscles and intraosseous, involving the mandible or maxilla [3, 4, 5]. Clinically a haemangioma appears as a soft tissue mass, smooth or lobulated and sessile or pedunculated and may vary in size from a few mm to several cm [6]. They are usually deep red and blanch on the application of pressure. Larger lesions may interfere with mastication [7].

Various theories have been proposed regarding the mechanism and pathogenesis of haemangiomas. Aberrant and focal proliferation of endothelial cells results in haemangioma [8]. North et al [9] proposed the placental theory of haemangioma origin by studying various histology and molecular markers such as GLUT1, Lewis Y antigen, Merosin, CCR6, CD15, IDO, FC and gamma receptor II. They concluded that positive staining for GLUT1 is considered highly specific and diagnostic for haemangioma and is useful in differentiating haemangioma from other vascular lesions [8]. Phleboliths are calcified thrombi that occur in venules, veins or sinusoidal vessels of haemangiomas involving the soft tissues adjacent to the jaws. They occur as single or multiple foci of calcification, round or oval in shape, and are usually radiopaque. When they are projected over the mandible or periapical mandibular dentition they may easily be confused with sialoliths [10]. The differential diagnosis of haemangioma includes pyogenic granuloma, epulis, epulis granulomatosa, telangiectasia and squamous cell carcinoma [7].
diagnosis of haemangioma is based on clinical history and physical examination. Imaging studies may be
necessary to clarify and confirm the diagnosis. Most haemangioma have typical MR appearance of low signal
intensity on T1-weighted images and high signal intensity on T2-weighted images, which reflects the preponderance
of fluid-filled cystic spaces [11]. Various treatments have been used in the management of haemangioma including
oral corticosteroids, intralesional injection of fibrosing agents, interferon a-2b, radiation, electrocoagulation,
cryosurgery, therapy, embolization and surgical excision [12, 13].

**Differential Diagnosis List:** Haemangioma of right buccal mucosa with phleboliths., Pyogenic granuloma, Epulis
granulomatosa, Telangiectasia, Squamous cell carcinoma

**Final Diagnosis:** Haemangioma of right buccal mucosa with phleboliths.

**References:**

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**Figure 1**

**a**

*Description:* Bone window showing well-defined foci of calcification (phlebolith) in the right buccal musal plane posteriorly. **Origin:** Chaurasia A, Department of oral medicine and radiology, King George Medical university, Lucknow, INDIA

**b**

*Description:* Bone window showing well-defined foci of calcification (phlebolith) in the right buccal musal plane posteriorly. **Origin:** Chaurasia A, Department of oral medicine and radiology, King George Medical university, Lucknow, INDIA
Description: A well-defined minimally enhancing heterogenous lesion measuring 2.3x1.2x3.0 cm in size with hyperdense foci (calcifications/phlebolith) is noted in the submucosal plane of the right buccal mucosa. Origin: Chaurasia A, Department of oral medicine and radiology, King George Medical university, Lucknow, INDIA
Description: A well-defined minimally enhancing heterogeneous lesion with 2nd phlebolith. Origin: Chaurasia A, Department of oral medicine and radiology, King George Medical university, Lucknow, INDIA
Description: CT angio showing a well-defined minimally enhancing heterogeneous lesion measuring 2.3x1.2x3.0 cm in size with hyperdense foci (calcifications) in the submucosal plane of right buccal mucosa posteriorly. Origin: Chaurasia A, Department of oral medicine and radiology, King George Medical university, Lucknow, INDIA
**Description:** CT angio showing hyperdense foci (calcification) in the submucosal plane of the right buccal mucosa anteriorly. **Origin:** Chaurasia A, Department of oral medicine and radiology, King George Medical university, Lucknow, INDIA
Figure 4

Description: 3D CT shows well-defined phleboliths. Origin: Chaurasia A, Department of oral medicine and radiology, King George Medical University, Lucknow, INDIA
Description: 3D CT shows well-defined phleboliths. Origin: Chaurasia A, Department of oral medicine and radiology, King George Medical university, Lucknow, INDIA