Case 14358

Eurorad

Sub-mucous lipoma along alveolar process of mandible and gingivobuccal vestibule

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Section: Head & neck imaging
Area of Interest: Head and neck
Procedure: Diagnostic procedure
Procedure: Computer Applications-3D
Procedure: Instrumentation
Procedure: History
Imaging Technique: CT
Imaging Technique: Experimental
Special Focus: Tissue characterisation Case Type:
Clinical Cases
Authors: Dr Ami Jani
Patient: 32 years, female

Clinical History:

A 32-year-old male patient presented with a longstanding (3-4 year) history of left cheek swelling. The lesion was gradually increasing in size. On examination it arose from the alveolar process of the mandible, related to the left canine and premolars.
Imaging Findings:

Ultrasound examination was performed with a 6.5 MHz probe extra-orally which showed a well-defined encapsulated lesion isoechoic to subcutaneous tissues. To understand its anatomical relationships a non-contrast CT of the face was performed.
On CT a well-defined homogeneous fat density lesion, measuring approximately 2.7 x 3.5 x 3 cm was seen arising from the mucosa of the alveolar process of the mandible related to the left canine and premolars, and the gingivobuccal sulcus. There was no evidence of internal necrosis or calcification. Underlying bone appeared normal with no evidence of erosion or extension into surrounding soft tissues.
Discussion:

Background: A lipoma is a benign well-encapsulated lesion that consists of adipose tissue. It can arise from any organ of the body and may be confused with other locoregional mass lesions. Oral mucosal lipomata are rare, accounting for 1-4 % of lipomata [1, 2].
Clinical Perspective: Lipomata present with swelling and are typically slowly growing lesions. On examination they are soft and characteristically show a 'slipping sign'- their margins 'slip' under the tip of the finger on palpation. In submucosal lipomata, overlying mucosa normally appears unremarkable [3].
Imaging Perspective: OPG shows normal teeth with a soft tissue mass. Ultrasound demonstrates a well-defined encapsulated mass lesion isoechoic to subcutaneous tissues. Non-contrast CT will show a well-defined homogeneous fat density lesion. In the absence of complications, non-contrast CT will suffice to make the diagnosis. Most oral lipomata do not show any complications. However, inhomogeneous density on NCCT needs further evaluation. Contrast-enhanced CT is indicated when the overlying mucosa and underlying bone of long-standing

lipoma develop superadded infection.
MRI may also be used to image such lesions, with signal characteristics following fat on all sequences.
Outcome: Lipomata can be diagnosed clinically. Oral submucous lipomata are rare. To rule out other lesions of the oral mucosa and buccal vestibule, imaging may be performed. The differential includes haemangioma, mucus retention cyst-mucocele, and abscess secondary to dental infection [2]. NCCT or MRI are usually sufficient for differentiating lipomata from other lesions. Homogeneous fat density confirms the diagnosis.
Most reported intraoral lipomata are uncomplicated. The risk of malignant transformation is unproven. There has been debate regarding the malignant potential of intramuscular lipomata. In a review of the literature, Matsumoto has reported a case of liposarcoma with multiple coexisting intramuscular lipomata suggesting malignant transformation of latter [4]. However, many studies have not found any such correlation [4]. Large lesions may be subject to repeated trauma and ulceration. Such ulcers can simulate malignancy. However, in the case presented the mucosa was intact.

Treatment: Surgery is the treatment of choice in symptomatic cases, usually performed under local anaesthetic.
Differential Diagnosis List: Submucous lipoma of the mandibular alveolar process and buccal vestibule, Mucous retention cyst, Osteoma of mandible, Infected dental root, Dentigerous cyst, Haemangioma

Final Diagnosis: Submucous lipoma of the mandibular alveolar process and buccal vestibule

References:

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Reddy KV (2015) Lipoma or hemangioma: A diagnostic dilemma?. Contemp Clin Dent Apr-Jun;6(2):266-9. doi: 10.4103/0976-237X.156064. (PMID: 26097370)
Hoseini AT et al. (2010) Lipoma in oral mucosa: two case reports. Dent Res J (Isfahan) Dent Res J (Isfahan). 2010 Winter;7(1):41 (PMID: 21448446)
McTighe, S., & Chernev, I. (2014) Intramuscular Lipoma: A Review of the Literature. Orthopaedic reviews 6(4), 5618

Figure 1

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Description: Clinical photograph showing well-defined rounded soft mass lesion arising from buccal mucosa in relation to alveolar process. **Origin:** Radiology Department, B.J.Medical college , Civil Hospital Ahmedabad, Gujarat, India

Figure 2

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Description: Clinical photograph showing well-defined lesion covered by mucosa. There is no evidence of ulceration of overlying mucosa. **Origin:** Radiology Department, B.J.Medical college , Civil Hospital Ahmedabad, Gujarat, India

Figure 3

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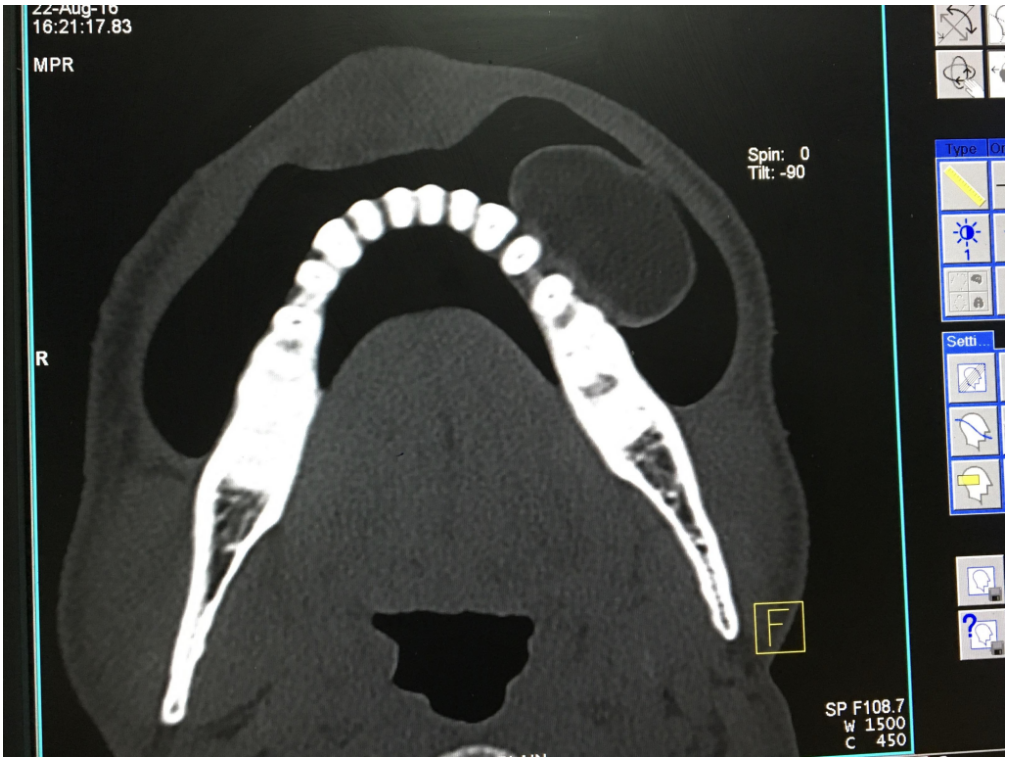

Description: Axial NCCT face with puff cheek showing fat density lesion arising from alveolar process of mandible in relation to canines and premolars. **Origin:** Radiology Department, B.J.Medical college , Civil Hospital Ahmedabad, Gujarat, India

Figure 4

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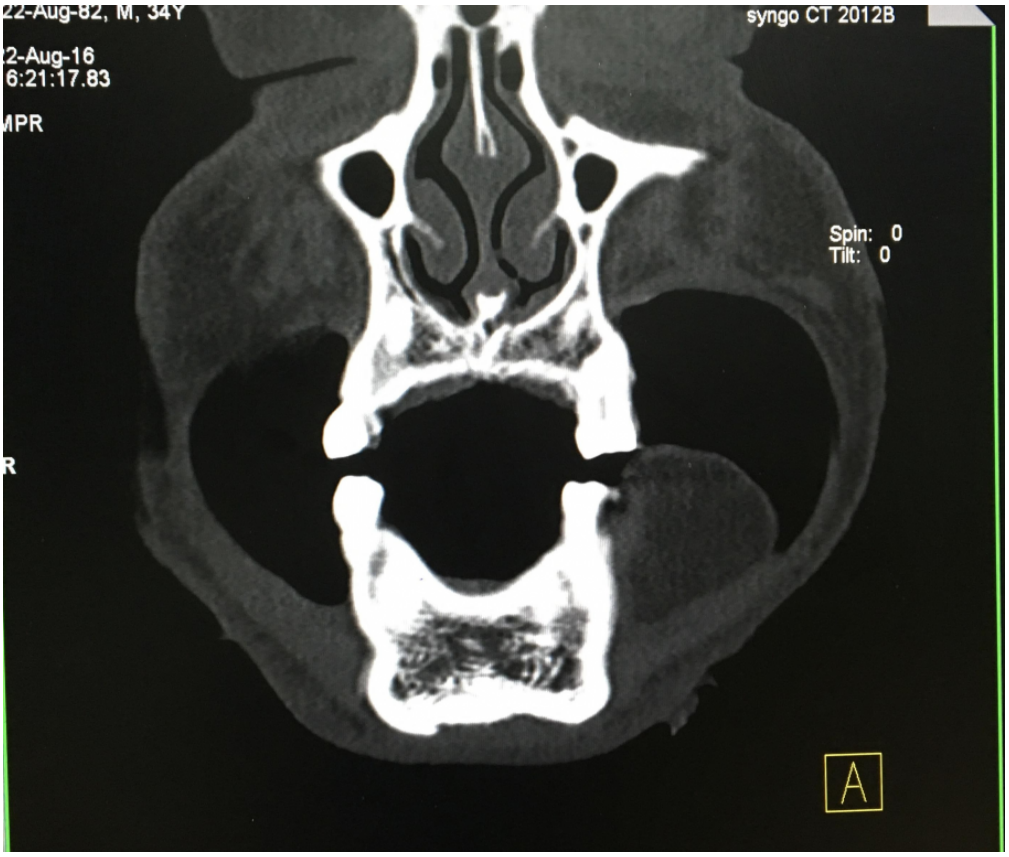

Description: Coronal images of NCCT face show fat density lesion in gingivobuccal sulcus on left side.
Origin: Department of Radiodiagnosis, B.J. Medical College, Civil Hospital Ahmedabad

Figure 5

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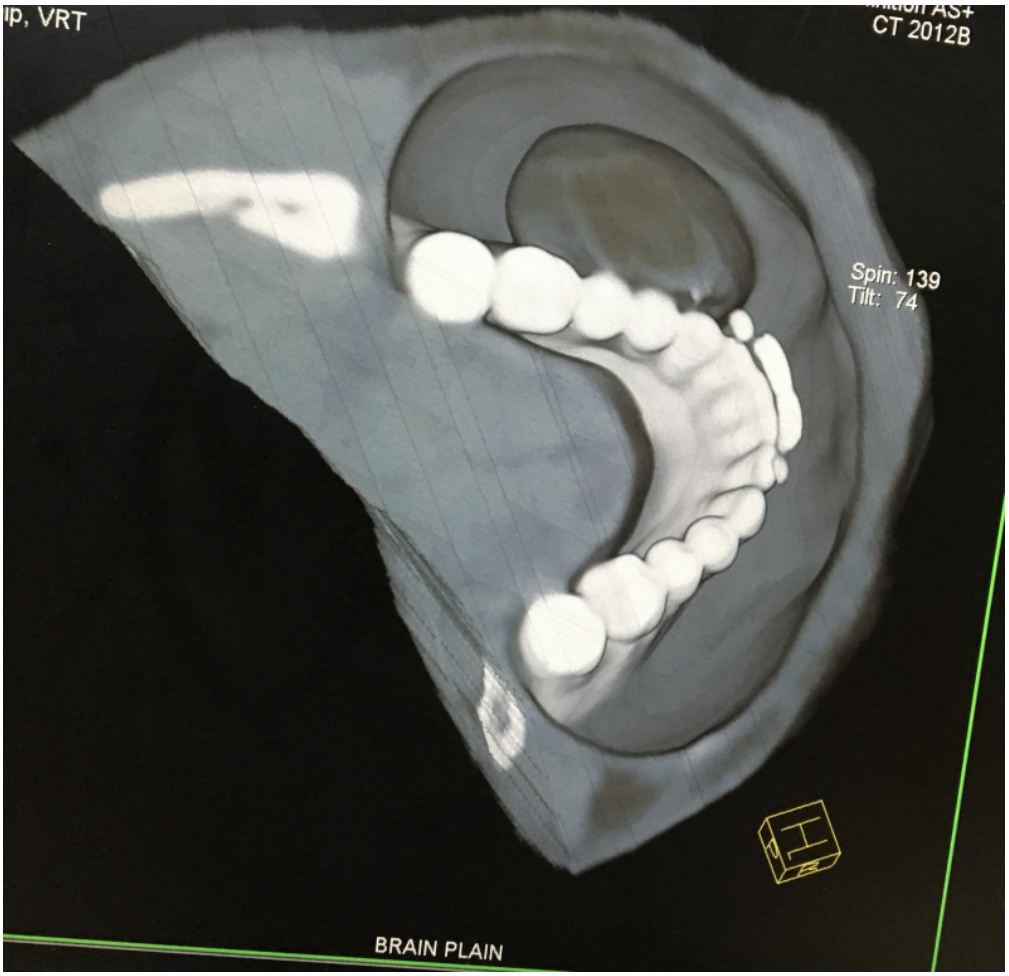

Description: 3D reconstruction of oral cavity with puff cheek shows mass lesion in gingivobuccal sulcus on left side in relation to premolars and molars. **Origin:** Department of Radiodiagnosis, Civil Hospital Ahmedabad.