Chewable intra-oral foreign body - chewing gum

Clinical History:

A 52-year-old male patient presented to the emergency department after a motor cycle accident. Non contrast CT examination of the facial bones was obtained due to right lower facial abrasions and pain.

Imaging Findings:

CT images on bone windows demonstrate a hyperdense irregular lesion along the right maxillary alveolar ridge posteriorly. There are a few punctate foci of air internally. Coronal CT imaging on bone windows shows that the lesion is separate from bone. The bone is normal in appearance.

CT imaging on soft tissue windows shows that there is no associated soft tissue thickening or adjacent fat infiltration.

Based on the CT findings, this 'lesion' was diagnosed as an intra-oral chewing gum. This was confirmed by evaluation of the patient by the ER physician.

Discussion:

Background
Various types of intraoral foreign bodies (IOFBs) are encountered in the setting of trauma including glass, wood, metal, dentures etc. Careful evaluation of these is essential for appropriate management. However, there is a different group of FBs which is intentionally placed in the mouth but accidentally imaged - chewable (comestible) FBs- including hard candies, soft chewable candies, chewing gum, and tobacco. Patients are typically instructed to remove these prior to imaging but this may not always be possible (for example, when a patient is obtunded or uncooperative).

Imaging Perspective
Chewing gum is among the most commonly encountered IOFB. It has a typical appearance on CT with an irregular shape (which conforms to adjacent structures), hyperdensity compared to surrounding soft tissues, and internal air bubbles. It is typically confined to the oral cavity and seen in predictable locations such as against the teeth, within mucosal recesses, between the tongue and hard palate, between mandibular and maxillary molars and under the tongue [1, 2]. Hard candies are easier to correctly identify as they generally retain their shape and are of higher density [1].

Take Home Message
It is important for radiologists to differentiate traumatic FBs from chewable FBs for appropriate and timely
management. Equally important is to not interpret these as true intra-oral pathology such as calculi, haematoma, vascular malformations, abscesses, bone lesions or mucosal malignancy [1]. Misdiagnosis can lead to unnecessary work-up (non-invasive or invasive) and apprehension. A 'lesion' seen in a typical location in the oral cavity with features suggestive of IOFB should be identified as benign and incidental. The easiest way to confirm the diagnosis is to check the patient. Such FBs should be promptly removed in order to avoid the risk of aspiration.

**Differential Diagnosis List:** Chewable intra-oral soft foreign body - chewing gum, Exostosis, Haematoma, Cosmetic implant

**Final Diagnosis:** Chewable intra-oral soft foreign body - chewing gum

**References:**


**Description:** Axial bone window CT shows a hyperdense irregular ‘lesion’ along the right maxillary alveolar ridge posteriorly. There are punctate foci of air within it. **Origin:** NYU Winthrop Hospital, Mineola, NY USA.
Description: Coronal bone window CT shows this lesion to be separate from bone, which is normal in appearance. Origin: NYU Winthrop Hospital, Mineola, NY, USA
Description: Axial soft tissue CT image shows that there is no mucosal thickening or adjacent fat infiltration. Origin: NYU Winthrop Hospital, Mineola, NY, USA