Mouth-Incisive Canal Cyst

By Dr Hassem Geha

A 30 year-old male presented to a dental clinic for a Snap-on Smile. He had no complaints except aesthetics.

Clinical examination showed missing #11, large caries on #27 and 36, and root fragments in the area of #46 as well as poor hygiene and gross build up. An initial phase of cleaning was advised prior to further evaluation.

A panoramic radiograph was acquired and showed periapical pathologies on #27 and 46.

In addition to that, in anterior maxilla, there was a well-defined, round shaped, corticated radiolucency, extending between the apices of #12 and 22, and from the middle-third level of #21 to the level of the floor of the nasal cavity. There were no radiographic signs of root resorption or root displacement. As this was a panoramic radiograph, the buccal and palatal cortical plate could not be evaluated.

The location, the shape and the extent of the lesion are highly suggestive of a benign lesion developing in the anterior maxillary suture, at the level of the incisive canal and are most likely an incisive canal cyst (also known as Naso palatine duct cyst).

The patient was recalled for further evaluation. He was asymptomatic in the anterior maxilla and there were no clinical signs of swelling in the palate. An excisional biopsy was advised to remove this cyst.
An incisive canal cyst is a developmental cyst non neoplastic cyst arising from degeneration of naso-palatine ducts. These ducts usually regress in foetal life. The persistence of ductal epithelium leads to formation of cyst.

It is considered the most common non-odontogenic cyst and develops only in the midline anterior maxilla.

**Epidemiology**

They most commonly occur in 4th to 6th decades, have a male predominance and affect about 1% of the population.

**Clinical presentation**

Most patients are symptomatic. They present as swelling of anterior palate, sometimes associated with pain and drainage. They must usually be larger than 0.6cm to distinguish cyst from incisive foramen, which is a normal anatomical feature.

**Pathology**

Cyst formation is due to spontaneous cystic degeneration of residual ductal epithelium. The vast majority of cases contain non-keratinized stratified squamous epithelium alone or in combination with other epithelia histologically. Approximately 30% cases contain respiratory epithelium.

**Radiographic features**

They are seen as a solitary well-defined, oval or round unilocular radiolucency, between central incisors, > 0.6 cm in diameter. They may appear “heart-shaped” if the anterior nasal spine superimposed. Root resorption and tooth displacement may be present.
Treatment and prognosis

Enucleation is usually curative, and recurrence is rare. Histological confirmation is recommended.

Differential diagnosis

General imaging differential considerations include:

- Periapical granuloma / periapical cyst
- Schwannoma in incisive canal region

References


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