ABSTRACT
The peripheral odontogenic tumors are rare, comprising only 0.05% of all biopsy specimens. POdF derived from overlying gingival epithelium or rest of dental lamina that remain in peripheral location (extra osseous). This case report describes the clinical and Histological features of a gingival growth in an 11-year-old boy that involved the overlying gingiva of maxillary anterior region. Despite the rarity of POdF presenting as a diffuse lesion, the lesion should be included as a possible differential diagnosis of diffuse single or multiple gingival lesions.

Key Words: Peripheral Odontogenic Fibroma, Maxilla, Odontogenic Tumour and WHO Type

INTRODUCTION
The odontogenic fibroma is a benign odontogenic neoplasm of fibroblastic origin characterized by relatively mature collagenous fibrous tissue and varying amounts of odontogenic epithelium with potential to occur in either a central or extra osseous location. The extra osseous counterpart is designated peripheral odontogenic fibroma (POdF) (Pindborg et al., 1971). POdF was designated, specifically in the past, also as, odontogenic gingival epithelial hemartoma by Baden and his co-workers and as a peripheral ameloblastic fibrodentinoma by McKelvy and Cherrick. POdF is an uncommon lesion of the gingiva. POdF appears to be slow growing, solid, firmly attached gingival mass, sometimes arising between teeth and sometimes displacing teeth. Thus, most of the POdF’s described in literature presented as single, focal swellings (Weber et al., 1992). Hence POdF may be mistaken for more common exophytic gingival lesions such as fibrous hyperplasia or pyogenic granuloma (Michaelides, 1992).

CASE REPORT
A 11 year old child presented with the chief complaint of over growth of gums in upper front right region from past 6 years. Extra oral examination revealed no significant findings. Intra oral examination revealed exophytic growth in relation to right maxillary lateral incisor and primary canine, covering the distal half of lateral to mesial half of primary canine (mesio-distally) extending from attached gingiva to slightly below the incisal edge of right maxillary lateral incisor and primary canine. The lesion present as a sessile firm enlargement with a pink, smooth non-ulcerated mucosal surface although it was asymptomatic but the lesion was slowly growing increasing in size, ranging from 0.5 to 3.5cm in diameter. A periapical radiograph showed a soft tissue shadow with or without flakes of calcification & no extension into the underlying bone (Fig.1 & 2).
Based on the clinical findings, an excisional biopsy was done to obtain a definitive diagnosis. The soft tissue was excised measuring about 1.5 x 1 x 1.2 cm, yellowish brown in color, firm in consistency. Rough surface and irregular in shape microscopically, the H&E stained soft tissue section shows highly cellular lesional tissue made up of plump proliferating fibroblasts, islands, cords of odontogenic epithelium, and areas of calcification. There are numerous active odontogenic islands surrounding the calcification which are eosinophilic with dentinal architecture suggestive of dentinoid.

**Figure 2:** Intra oral periapical radiograph in right maxillary lateral incisor and right primary canine

**Figure 3:** Histologic spectrum of POdF

The intervening connective tissue stroma was scanty and consists of numerous blood vessels. The surrounding connective tissue is made up of fibrillar stroma with dense infiltrate of chronic inflammatory cells mainly of lymphocytes which overlying epithelium shows parakeratinized layer.

**Histological examination**

Overall histopathological pictures suggest of peripheral odontogenic fibroma. A diagnosis of POdF was rendered based on the microscopic findings (Fig. 3).

**Treatment**

A simple surgical excision was done under local anaesthesia and patient was under observation. Prognosis was excellent.

**DISCUSSION**

Peripheral odontogenic fibroma (POdF) is a rare benign mesenchymal odontogenic neoplasm with or without odontogenic epithelium, which typically presents as a raised firm, painless, smooth-surfaced gingival mass. It is considered to be the mucosal analog to the central odontogenic fibroma (Michaelides, 1992). Though peripheral odontogenic tumors are rare, comprising only 0.05% of all biopsy specimens, POdF is the most common peripheral odontogenic tumor, even more common than its central counterpart by a ratio of 1.4:1 (Buchner et al., 2006). There is a wide age range, which extends from the first to ninth decade of life, with incidence showing a slight increase in the third decade. There is equal gender distribution, with some studies finding a slight female predilection; and others, a slight male predilection (Martelli-Junior et al., 2006). It seems to affect Whites more often than Blacks (Gardener, 1982); however, some studies have noted a higher prevalence in Blacks (de Villiers Slabbert and Altini, 1991). The POdF can arise throughout either arch but tends to occur in the mandibular canine-premolar and maxillary anterior areas (Rinaggio et al., 2007).

The histologic spectrum of POdF (WHO type) is characterized by relatively mature collagenous fibrous tissue and varying amounts of odontogenic epithelium. Granular cell type of POdF is a histological variant that shows the presence of numerous stromal granular cells (Rinaggio et al., 2007). A key feature is the presence of multiple nests and strands of odontogenic epithelium in a cellular and fibrovascular stroma that often has myxoid areas interspersed. Dysplastic dentin and cementum-like calcifications are found in some lesions, but these are not consistent findings. An unusual feature of the present case is that several bizarre multinucleated stromal cells were scattered throughout the tumor (Catherine, 2001).
The treatment is to ensure complete surgical excision of the lesion, which frequently results in a mucogingival defect. The combination of excisional biopsy and periodontal plastic surgery is a one-step procedure, which seems to be suitable in most areas of the mouth, regardless of esthetic significance (Manor et al., 1999). The recurrence rate of POdF has been reported to be from very low to as high as 38.9% (Michaelides, 1992; Gardener, 1982).

REFERENCES


