CASE REPORT

Peripheral cementifying fibroma: a clinical diagnostic dilemma

Shikha Choubey,¹ Naveen Reddy Banda,² Vanaja Reddy Banda,³ Saket Vyawahare⁴¹Department of Pedodontics and Preventive Dentistry, SAIMS Dental College, Indore, Madhya Pradesh, India²Department of Pedodontics, MDCRC, Indore, Madhya Pradesh, India³Department of Oral Medicine and Radiology, Modern Dental College and Research Centre, Indore, Madhya Pradesh, India⁴Department of Pedodontics, Modern Dental College and Research Centre, Nagpur, Maharashtra, India**Correspondence to**Dr Vanaja Reddy Banda,
drreddybanda@rediffmail.com**SUMMARY**

The peripheral ossifying fibroma (POF) is a reactive gingival overgrowth occurring frequently in the anterior maxilla. It originates in the cells of the periodontal ligament and is more common in children and young adults. In the current article a case of gingival overgrowth, which was thought to be puberty-induced gingivitis was seen in the lower anterior maxillary gingiva. Histology of the excised tissue showed cellular, fibrous connective tissue stroma with calcified osseous calcifications indicative of POF. The definitive diagnosis is established only by histological examination, which revealed the presence of highly cellular connective tissue with focal calcifications. Surgery is the treatment of choice, though the recurrence rate can reach 20% in case of POF. After histological confirmation the recall and clinical evaluation protocol of POF varies due to its increased recurrence rate, which the general dentist should be aware of.

BACKGROUND

Peripheral cementifying fibroma (PCF) is described as a reactive focal overgrowth of gingival mucosa. The synonyms includes PCF, peripheral fibroma with cementogenesis, peripheral fibroma with osteogenesis, peripheral fibroma with calcification, calcifying or ossifying fibrous epulis and calcifying fibroblastic granuloma.¹ PCF is classified into two subtypes, the central type and the peripheral type. The central type arises from endosteum or the periodontal ligament adjacent to the root apex and causes expansion of the medullary cavity, while the peripheral type is seen on the gingiva or even the mucosa.²⁻³ PCF is a slow-growing, non-aggressive lesion occurring on the gingiva and appearing as a nodular mass, either pedunculated or sessile that arises from the interdental papilla. The surface may be smooth or ulcerated and pink to red in colour shows higher female predilection (2:1 to 3:1), in the third to fourth decades of life. It has a slight predilection for anterior jaw segments.⁴ The rate of recurrence is described as high.¹⁻⁵ The present case highlights a less-common clinical appearance of the same.

CASE PRESENTATION

A 13-year-old girl reported to the department of paediatric dentistry with the chief complaint of bleeding gums. Intraoral examination revealed a full complement of permanent dentition. Gingiva was soft, oedematous, enlarged and reddish-pink in colour. There was spontaneous bleeding from the gingiva. There was severe gingival enlargement on

the labial gingiva in relation to anterior teeth of the mandible. In the region of mandibular right canine, there was large gingival overgrowth that was soft, measuring 3×1.5 cm (figure 1). The provisional diagnosis was pubertal gingivitis secondary to poor oral hygiene was given.

INVESTIGATIONS

Prior to surgery, a complete blood picture was performed. All values were within normal limits. Intraoral periapical radiograph of the lower anterior segment was recorded which had no findings (figure 2).

DIFFERENTIAL DIAGNOSIS

Central cementifying fibroma, pubertal gingivitis, peripheral giant cell granuloma, pyogenic granuloma.

TREATMENT

After scaling and root planning, excision of hyperplastic gingiva along with aesthetic recontouring was carried out under local anaesthesia. The lesion bled heavily and haemostasis was difficult to achieve although the haematocrit values of the patient were in the normal range. These observations pointed towards the lesion being puberty-induced gingivitis. After haemostasis was achieved with adrenalin-soaked gelfoam, the excised tissue was sent for histopathological analysis. The patient was advised for better oral hygiene and aesthetic recontouring of the remaining gingiva was performed after 3 months.

OUTCOME AND FOLLOW-UP

Microscopic section showed a benign fibro-osseous lesion with an oral stratified squamous epithelium having focal areas of ulceration and an underlying dense, fibrous, cellular connective tissue stroma

Figure 1 Intraoral photograph showing enlarged marginal and papillary gingiva in lower anterior region.

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Figure 2 Intraoral periapical radiograph without any significant findings.

containing proliferating plump fibroblasts, with basophilic mineralised foci resembling cementum and some of them had a light staining peripheral border. Based on the histopathological examination, a diagnosis of PCF was made. The clinical features of the lesion were quite contrary to those traditionally attributed to a cementifying fibroma (figures 3, 4). The patient presented for follow-up after 6 months and there was no evidence of recurrence even though the oral hygiene maintenance was poor (figure. 5).

DISCUSSION

The present case is a rare appearance of cementifying fibroma since its clinical features were indicative of pubertal gingivitis,

Figure 4 Slide showing basophilic concentric calcifications suggestive of cementicles.

which is seen in the second decade of life, is soft and oedematous, associated with severe plaque and calculus showing increased vascularity, multiple fibroblast, oedema and infiltration of leucocytes into the gingiva on histopathological examination.¹ However none of these microscopic features were seen in this case. No radiological findings were observed in the present case. This is in accordance with studies of Farquhar *et al.*⁶ A study of 2439 cases of epulis, recorded the following prevalence: peripheral fibromas 61.05%, pyogenic granulomas 19.76%, POF 17.67% and peripheral giant cell granulomas 1.52%.⁷ Sometimes, on rare occasions, there does appear to be superficial erosion of bone or/and radiopaque foci of calcifications scattered in the centre of the lesion. The clinical appearance of the gingival lesion is characteristic but not pathognomonic, therefore histopathological analysis becomes mandatory. Although, PCF is a benign reactive lesion, the recurrence is fairly high which has been reported in the literature at a

Figure 3 Slide showing hyperplastic para keratinised squamous cell.

Figure 5 Intraoral photograph of the area after 6-month follow-up.

rate of 9,⁸ 16⁹ and 20%.¹⁰ Taking into consideration the recurrence rate a recall regime of increased frequency is to be adopted for betterment of the patient.

Learning points

- ▶ Relying only on clinical features of a disease can lead to misdiagnosis, therefore histopathological examination is a must.
- ▶ High recurrence rate of peripheral cementifying fibroma may be attributed to faulty surgical technique.
- ▶ Removal of aetiological factors is as important as surgical correction in all conditions causing hyperplastic type of gingivitis.

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