

### Case history: Part 2

The first part of the case history was discussed in *Int J Dent Hygiene*, Vol. 1 (issue 4), 2003.

A 44-year-old male visits the dental hygienist. He has a hectic job and is father of three children. The patient was referred by the dentist because of poor oral hygiene. He indicates that his front teeth are painful and that he has a nagging pain in the molar area in the fourth quadrant.

#### Medical history

The patient has once fainted during a dental treatment and has a dry mouth. He suffers from stomach trouble and disgorges his food regularly.

#### Dental history

The patient has never been treated by a dental hygienist. Eight years ago, crowns were placed on the 1.3 and 2.3. In the lower jaw, crowns were placed because the patient was dissatisfied with the colour and form of his teeth (Fig. 1). The crowns are used to secure a partial denture with a cast metal framework.

- A non-electric toothbrush is used.
- The patient grinds his teeth during his sleep.
- The patient says he is motivated to improve his oral health.

#### Mouth inspection

The swelling of the gingiva of the 1.1 is evident. Gingival swelling occurs interdentally at the 3.6–3.7. The gingiva shows



Fig1. Patient's mouth.

marked redness and bleeds heavily upon probing. Subgingivally, retention is found. Pocket depth locally is 8 mm.

The same is true for the front teeth. Lingually, the 1.3 and 2.3 have a red and swollen gingiva. Plaque is seen all over.

### Questions

1. A periodontal abscess can be classified in many cases. What type of lesion is the acute periodontal abscess?
2. Name three other types of periodontal abscesses.
3. Inflammation of the periodontal tissue can cause the forming of periodontal pockets. When a periodontal abscess is formed, the pus can drain via the pocket. What are the diagnostic characteristics of the periodontal abscess? Name five of these.
4. Scaling and planing are procedures in the treatment of periodontal pathology. In these procedures, not only the bacterial plaque biofilm and calculus will be removed but also a part of the dentin. Is this dangerous for the vitality of the root canal?
5. Which five microbial species are most associated with a periodontal abscess?
6. Supragingival scaling alone is totally inadequate in periodontal treatment. Why?
7. What is the treatment of an acute periodontal abscess?

### Answers

1. The acute periodontal abscess is a lesion with expressed periodontal breakdown, occurring over a limited period of time and with easily detectable clinical symptoms. It is characterized by pain, swelling and other symptoms that lead the client to seek urgent care [1].
2. (a) a gingival abscess  
(b) a periodontal abscess  
(c) a chronic periodontal abscess [1].
3. (a) the lesion extends wide in the direction of the crown  
(b) the gradual transition to the gingiva sulcus  
(c) the distal and/or mesial bone ridge show sign of bone loss  
(d) generally plaque biofilm and calculus are seen on the root surface  
(e) similar pathology is seen around other teeth  
(f) a normal pulpal sensitivity  
(g) the patient is generally an adult.

If the pathology is only found in one tooth, the cause is generally local, e.g. a congenital groove, a restoration with an overhanging margin, etc. [2].

4. No [3]. A sense of dentinal sensitivity often exists because of hydrodynamic intertubular liquid movements, which bother the patient but cannot be helped. In rare cases, lateral dentinal canals can be opened because of deep scaling, which causes severe pain. This lesion is called a retrograde pulpitis, which can also be caused by periodontal pathology in the area of the foramen apicale. Sometimes it is advisable to do a preventive endodontic treatment.

Periodontal therapy often comprises many years of periodic control in which scaling and root planing are repeated. This can lead to reparative dentin in the pulp. The long-term prognosis of the pulp in these cases is not clear. It seems that caries and periodontitis have more influence on the process than periodontal treatment itself [4].

5. *Porphyromonas gingivalis*

*Fusobacterium nucleatum*

*Prevotella intermedia*

*Actinobacillus actinomycetemcomitans*

*Bacteriodes forsythus*

*Capnocytophaga ochraceus*

*Eikenella corrodens*

*Campylobacter recta*

*Selenomonas species*

*Treponema denticola* [1].

6. It may predispose periodontal clients to acute abscess formation [1]
7. Treatment consists mainly of drainage and appropriate use of antimicrobial agents. The acute phase of the disease must be managed to alleviate pain and prevent spread of infection. The

abscess must be drained, either through the pocket opening or through incision. Drainage through the pocket is less invasive and is commonly performed by dental hygienists. The tooth or teeth in the affected area are anaesthetised and scaled. Post-operative instructions call for rest, fluid intake and warm saltwater rinses to help reduce swelling. The client should be scheduled to return in 24–48 h for re-evaluation. The treatment sometimes requires an incision and a surgical flap procedure to provide access to perform debridement. Should the client be febrile or if lymphadenopathy is present, the dentist may prescribe antibiotics [1].

## References

- 1 Darby ML, Walsh MM. *Dental Hygiene, Theory and Practice*, 2nd edn. St Louis: Saunders, 2003; pp. 512–6.
- 2 Bermans L, DeCort S, Lambrechts P. Paro-Endoproblemen. Handboek Parodontologie, aflevering 3. Houten: Bohn Stafleu Van Loghum, 2002; pp. 13–5.
- 3 Bergenholtz G, Lindhe J. Effects of experimentally induced marginal periodontitis and periodontal scaling on the dental pulp. *J Clin Periodont* 1978; **5**: 59–73.
- 4 Bergenholtz G, Nyman S. Endodontic complications following periodontal and prosthetic treatment of patients with advanced periodontal disease. *J Periodont* 1984; **55**: 63–8.

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