

## Case Report

# 'Can Chronic Periodontitis manifest with Acute Pain?' A diagnostic Dilemma

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### ABSTRACT

**Background:** Chronic periodontitis is a major cause of tooth loss in today's world. The disease is characterised by loss of periodontal attachment support and bone resorption, eventually resulting in tooth mobility and loss. Acute pain symptoms in chronic periodontitis are clinically rare and it has been scarcely reported in the literature. Here we present a case of acute pain manifestation in chronic periodontitis. A 34-year-old female was referred to the Department of Periodontics for the treatment of persistent pain in upper right back tooth region. The dental history of the patient revealed her visit to multiple dental clinics with same complaint and she was prescribed antibiotics and analgesics but had no relief. Based on detailed clinical and radiographic examination a Provisional diagnosis of chronic periodontitis was made. Surgical periodontal therapy was initiated and Patient responded well to the treatment.

**Conclusion:** Although rare, chronic periodontitis can manifest with acute pain symptoms. Therefore chronic periodontitis should be included in the provisional diagnosis in patients with acute pain with no established cause.

### INTRODUCTION

Dental pain is the most common cause of visit to dental clinics for immediate relieve and treatment. Most cases of dental pain are easily diagnosed but on rare occasion it becomes a challenge for the clinicians to establish the cause of pain and treatment.

And among the numerous causes, pain of pulpal origin, gingivitis and some acute gingival diseases or conditions such as Acute Necrotising ulcerative gingivitis, acute herpetic gingivostomatitis etc. elicit acute pain symptoms in patients.

Gingivitis is common clinical finding present in majority of the population. It is defined by presence of gingival inflammation without the loss of periodontal attachment.

<sup>[1]</sup> Generally not all gingivitis progresses to periodontitis, but it is believed that periodontitis must be preceded at some point by gingivitis. <sup>[2]</sup>

Periodontitis is a chronic inflammatory disease which is caused by infection of the periodontal supporting tissues around the teeth <sup>[3]</sup> leading to pathological loss of collagen fibres, apical migration of the junctional epithelium eventually resulting in loss of alveolar bone support and periodontal attachment. <sup>[4]</sup>

Chronic periodontitis is the most prevalent form of periodontitis characterized by a painless, slow progression. <sup>[5]</sup> Periodontal infection is diagnosed on the basis of clinical assessments. <sup>[6]</sup> The parameters which are used for the clinical assessment of periodontitis are Probing depth (PD), Clinical attachment levels (CAL), Bleeding on probing (BOP), radiographic assessment of pattern and extent of alveolar bone loss. <sup>[7]</sup> Because chronic periodontitis is usually painless, patients may be totally unaware that they have the disease and may be less likely to seek treatment.

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Further the presence of acute pain manifestation in chronic periodontitis cases has been scarcely reported in literature. Hence the purpose of this case report is to highlight the possible occurrence of acute pain in patient with sign and symptoms of chronic periodontitis.

### **Case History**

A 34 year old female came to the Department of Periodontology with the chief complaint of pain in upper right back tooth region for last 2 months. She stated that the pain was sudden in onset, sharp in nature, radiating to head and was relieved on taking analgesics which she was taking continuously for the past 2 months. She gave previous dental history of her visit to multiple dental clinics where the cause of pain could not be established, though she was prescribed antibiotics, analgesics as well as sedatives for pain control. Despite all these her pain persisted and she was then referred to the department of Periodontology.

Patient was visibly apprehensive at the time of examination and after detail counselling clinical examination could be started. Whereby, one peculiar finding was observed that the patient was not even allowing to measure CAL/Pocket depth without Local Anaesthesia. Slight touching of probe with mild pressure provoked pain that radiated to her head region making her feel distressed and uncomfortable. Upon repetitive counselling, reassurance & with topical LA spray, probing depths and clinical attachment levels were measured which revealed generalised loss of clinical attachment and presence of probing pocket depths.

Radiographic examinations with IOPA & OPG revealed generalised loss of bone especially in upper posterior molar region. Pattern of bone destruction was vertical as well as horizontal in nature.

Hence on the basis of clinical and radiographic examination a provisional diagnosis of chronic generalised periodontitis was made and decision was made to treat the patient.

Phase-I therapy was completed in two visits with interval of 2 weeks in between where the patient was managed with oral hygiene instructions, thorough scaling and root planing, analgesics and use of 0.2% chlorhexidine gluconate mouthwash.

On subsequent visit there was decrease in patient apprehension. After four weeks of periodontal therapy, even though there was no change in probing depth or CAL but pain and clinical symptoms were resolved. It was decided to proceed with surgical therapy for reconstruction of lost periodontal support. An open flap debridement using Kirkland flap was done and patient was put on supportive periodontal therapy.

### **Discussion**

Chronic periodontitis is painless and slow progressing disease. Because of which it is not reported as the chief complaint of a patient to seek periodontal care.

In a study of Brunsvold & Oates 1999 they reported that among the subjects of chronic periodontitis only 6.2% of the subjects reported having painful gingiva.<sup>[8]</sup>

The various cause of dental pain for which patient seeks dental treatment are pain of pulpal origin, pain due to neuralgia, pain because of acute gingival conditions such as acute necrotising ulcerative gingivitis, acute herpetic gingivostomatitis, acute pericoronitis and gingival/periodontal abscess. However the presence of acute pain symptoms in chronic periodontitis has been scarcely reported in the literature.

The peculiarity in the present case is the presence of acute pain symptoms in the absence of attributable cause of origin of the pain based upon the diagnosis made in

various dental clinics for which patient had been prescribed antibiotics, analgesics and even some sedatives. Pain of pulpal origin and neuralgic pain were ruled out on the basis of clinical and radiographic examination. Provisional diagnosis of generalised chronic periodontitis was made on the basis of presence of pocket depth and generalised loss of clinical attachment level clinically and generalised loss of bone confirmed radiographically. With the consent of the patient, it was decided to treat the patient with Non-surgical and surgical periodontal therapy.

Non-surgical therapy was completed in 2 visits which included thorough scaling and root planing, oral hygiene instructions, analgesics and with use of 0.2% chlorhexidine gluconate mouthwash. After 4 weeks of non-surgical therapy, pain and clinical symptoms were resolved and it was further decided to treat the patient surgically for the reconstruction of the lost periodontal support which comprised of open flap debridement using Kirkland flap. Patient was put on Supportive periodontal therapy thereafter. Patient responded well to the treatment undertaken.

In findings of some reports it was demonstrated that periodontal therapy including root debridement with or without surgical exposure of the affected root surfaces may reduce gingival inflammation and prevent further loss of attachments.<sup>[9-11]</sup> and the additional flap procedure help in greater pocket reduction and attachment gain for deeper pockets.<sup>[12]</sup>

Hereby, in this case the cause of pain can be attributed to the extreme sensitivity which the patient was having as a result of severe clinical attachment level loss and deep periodontal pocket.

Because the disease is painless, patients rarely seek out periodontal care. Thus, it is not uncommon for the disease to go undiagnosed until it has progressed to

moderate to advanced stages of periodontal breakdown, characterized by recognisable radiographic bone loss with or without tooth mobility. The challenge encountered in treating periodontitis is a well-timed and proper diagnosis. Proper diagnosis and treatment in its earliest stages will prevent future periodontal breakdown.

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