

Phantom Tooth Pain: A Diagnostic Dilemma

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ABSTRACT

Diagnosis is essentially the appraisal of the nature of a disease, based on the study of signs and symptoms. Patients with chronic oral or facial pain often present a diagnostic challenge to the practitioner. This paper is on the diagnosis and management of a case of chronic pain in the maxillary anterior region. The final diagnosis was made as phantom tooth pain. This case report illustrates the importance of having a thorough knowledge of both odontogenic and nonodontogenic causes of orofacial pain and stresses the need for careful diagnosis before rendering any treatment.

Keywords: Phantom tooth pain (PTP), Orofacial pain, Diagnosis.

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INTRODUCTION

Pain is defined as an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage.¹ Chronic oral or facial pain that is not correctly diagnosed is a cause for long spells of suffering to a patient. This article presents the case of a patient with chronic oral pain where correctly diagnosing and managing the pain was a challenging task.

CASE REPORT

A 26-year-old male patient reported to the Department of Conservative Dentistry and Endodontics, Amrita School of Dentistry, complaining of diffuse pain in the maxillary anterior region. History revealed that the patient had met with a traumatic injury to that region 10 years ago. He had developed pain and swelling in the region one year back, for which he underwent endodontic therapy with apicoectomy of teeth 21 and 22. As the pain persisted even after 6 months, teeth 21 and 22 were extracted and endodontic therapy was performed on 11. As this also did not relieve the pain, he was referred to our institution. The radiographic records of the previous dental treatment as provided by the patient were reviewed (Figs 1 and 2). At present, the clinical and radiographic examinations revealed irreversible pulpal inflammation of teeth 12 and 23 and over obturation on 11 with persistent apical periodontitis (Figs 3 to 5). Hence endodontic therapy of 12, 23 and nonsurgical retreatment of 11 was planned and performed (Figs 6 and 7).

After 1 week, 12, 11 and 23 were asymptomatic but the pain was now localized in the edentulous 21 and 22 region. At this stage, a surgical exploration of the site was planned. Under local anesthesia, a full thickness mucoperiosteal flap was elevated extending from 11 to 23 to expose the bony defect (Fig. 8). Curettage was performed, and tissue sample from the site was sent for histopathological examination which reported the specimen to be granulation tissue.

On review after one month, although the symptoms of the patient had largely subsided, a vague diffuse pain of mild intensity persisted in the region. At this point, a probable diagnosis of phantom tooth pain was considered.



Fig. 1: Intraoral periapical radiograph taken 1 year back



Fig. 2: Orthopantomograph taken 6 months back



Fig. 3: Clinical photograph of anterior dentition



Fig. 4: Preoperative radiograph of 11 and 12



Fig. 5: Preoperative radiograph of 23



Fig. 6: Postoperative radiograph of 11 and 12 region



Fig. 7: Postoperative radiograph of 23



Fig. 8: Surgical exploration

The patient was then prescribed amitriptyline 20 mg per day as a single dose. After two days of medication, the patient reported reduction in pain and, by the fifth day, the pain had significantly diminished. After one month, the patient reported that he was symptom free for the first time in over a year. The patient is scheduled for regular follow-up.

DISCUSSION

The importance of diagnosis and treatment planning in any case cannot be overemphasized. In this case, the misdiagnosis and erroneous treatment plan in the initial phase of treatment rendered 8 months back not only caused the patient's symptoms to persist but also resulted in loss of his two anterior teeth.

When the patient presented to our department, the pain was reported to be diffuse in nature extending over the maxillary anterior segment. Two teeth adjacent to the edentulous area (12 and 23) were nonvital on examination. The tooth which had undergone endodontic therapy was over-obtured. Our first line of management was focussed

on these obvious problems. It was after these procedures that the pain was felt to be more localized on the edentulous area. The radiolucency in relation to that area was initially dismissed as scar tissue. However, the specificity of location of the pain warranted further exploration and, thus, the surgery was performed. The recovery of unhealed granulation tissue from the site justified the invasive procedure. It also suggests that a thorough apicoectomy, if done in the initial phase, could have pre-empted the complications that ensued.

It was then perplexing that, at the review appointment, the patient complained of persistent vague diffuse pain in the edentulous region. Also taking into account the history of traumatic injury and treatment procedures, he had undergone previously, namely apicoectomy and extractions, the diagnosis of phantom tooth pain was considered.

Phantom tooth pain is a diagnosis of exclusion, based on ruling out all other pathologies that originate from teeth and adjacent structures.² This refers to a syndrome of persistent pain or paresthesia in teeth or other oral tissues that occurs subsequent to dental procedures like extraction, pulp extirpation or periradicular surgery,³ which in turn might alter the neural continuity of the tissues creating deafferentation.⁴

The most effective reported treatments for phantom tooth pain are pharmacologic with the drugs of choice being tricyclic antidepressants, such as amitriptyline. They act by the inhibition of synaptic serotonin and norepinephrine reuptake.⁵⁻⁷

CONCLUSION

The symptoms of a patient, especially pain, may be caused by multiple factors which may be correlated or may even exist independently. All the probable causes of pain have to be carefully investigated to arrive at the correct diagnosis.

This case report reiterates the significance of forming a definitive diagnosis before the commencement of therapy and, most importantly, before any irreversible procedure is recommended.

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