

Tooth Pain Can Be Indicative of Undiagnosed Atrial Septal Defect.

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Case Report

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ABSTRACT

Orofacial pain has been associated with many systemic diseases including some cardiac problems. Here we have discussed a case where the patient's tooth ache was the only presenting complaint for an undetected atrial septal defect. This is to focus attention to the fact that any unexplained orofacial pain could be an indication for some undiagnosed condition and also highlight the critical role of a dentist in patient education and recognition of tooth ache as a possible cause of undetected congenital cardiac problems.

INTRODUCTION

Orofacial pain can be the symptom of a broad spectrum of diseases. It may be due to diseases of orofacial structures or may be from remote sources. It may also occur in the absence of detectable physical, imaging or laboratory abnormalities and can be a diagnostic challenge to the clinician. The possible causes of orofacial pain are considerable and cross the boundaries of medical and dental disciplines. An interdisciplinary approach is required to establish a diagnosis and treatment [1]. In this article a case is discussed where a tooth ache was found to be indicative of an undiagnosed atrial septal defect. There are no previous reports about this correlation in literature.

Case Report

A 27 year old male patient reported to the dental outpatient department with pain in the maxillary right first premolar. The pain was of spontaneous in nature with no aggravating factors. The patient had many previous episodes of this localized pain since the past four years and had visited many dentists regarding this complaint. Sometimes the pain was reported to be radiating to the right eye and right temporal region lasting for about two hours. This pain was at times reported to be at night which lasted till next day morning which gave the impression of acute pulpitis. The patient had consulted a neurologist earlier and was on medications for cluster headache. The patient was on analgesics as and when the pain became intolerable. On examination intraorally there was no dental caries. Oral hygiene was found to be satisfactory. There was no gingival inflammation, no percussion pain on the premolar and no other focus of infection in the oral cavity. Radiographs were made to rule out any undetected interdental caries. Since the patient sometimes had pain in the right maxillary region the patient was ruled out for maxillary sinusitis by the ENT surgeon. The patient was then referred to a neurologist and an MRI brain was done and was found to be normal. The provisional diagnosis was made to be cluster head ache or paroxysmal hemicranial head ache. But to rule out any other remote causes he was referred to a cardiologist for echocardiogram. It was found that the patient had a large ostium secundum atrial septal defect with left to right shunt and early surgical correction was advised. The patient underwent the surgery and on review at dental department reported that the pain in the premolar region had subsided since then. The patient was asked to review after six months and was found to be completely asymptomatic.

DISCUSSION

It is known that tooth ache may be caused by a problem not originating from a tooth or jaw. There are numerous diseases of orofacial region which may be confused to be originating from tooth. Atypical presentations of cardiac problems include tooth ache, abdominal pain, back pain or throat pain [2]. Sometimes pain due to angina has tooth ache as the only symptom [3]. Evaluation by the doctors and the dentists is necessary to establish a proper diagnosis so that treatment would be directed to the source of pain and not to the site of pain [4].

New epidemiologic evidence suggests that referred craniofacial pain in coronary heart disease is more common than previously believed. Current medical reports suggest that in addition to coronary disease some thoracic disorders can cause referred orofacial pain. Recent physiological evidence from animals and humans suggest that the vagus nerve mediates this referral of cardiac pain to the maxillary facial region [5]. The mechanism of this effect remains obscure. An electrical stimulation of a cardiac branch of left vagus nerve in humans can cause referred craniofacial pain. This leads to the hypothesis that vagus plays a role in the referred pain [6].

Atypical odontalgia described as a chronic pain disease is sometimes characterized by pain localized to teeth or gingiva. This pain often has no explanation to be found on physical or radiographic examination [7]. The literature in this area is primarily case reporting and is a poor guide to the likelihood of finding evidence that implicates a previously undiagnosed systemic disease as the cause of patients unexplained orofacial pain. The assumption underlying all diagnostic procedure should be that there will be an explanation for the patient's complaint of pain and when extensive and reasonably adequate diagnostic investigations fail to find an explanation for the patient's symptom the clinician should probe for some unusual conditions to be source of pain.

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