

MANDIBULAR PAIN AS THE SOLE SIGN OF ISCHAEMIC DISEASE: A CASE REPORT

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ABSTRACT

A case of anginal pain referred solely to the mandible is presented. The patient had sought treatment for the pain from several private dental practitioners prior to being diagnosed as having an ischaemic heart disease. Subsequent cardiac evaluation confirmed her condition. The importance of thorough history-taking, clinical evaluation and correct diagnosis is emphasized. It also ensures the delivery of appropriate dental treatment for these medically compromised patients without the risk of exacerbating the condition.

INTRODUCTION

The diagnosis of orofacial pain may prove to be one of the most challenging and frustrating problems faced by a dental practitioner. Referred pain from the cranial and nasal cavities, paranasal sinuses and the heart are not uncommon. The extensive and overlapping nature

of innervation of this region accounts for these many subtle pain experienced, some of which may be the first sign of a life-threatening disease^{1,2,3}.

Ischaemic heart disease is a major cause of morbidity and death in our country and angina pectoris is one of the most important early clinical manifestations of coronary artery disease. Constrictive chest pain which radiates to the left arm and neck, particularly upon exertion should not be overlooked. One of the most important differential diagnosis of orofacial pain is coronary artery disease, a condition which can be life-threatening if not recognized and treated promptly.

CASE REPORT

A frail-looking 69-year-old female attended the dental clinic, University of Malaya, in March 1995 complaining of a sharp pain on the left side of the lower jaw, for no apparent reason. She was edentulous and had not worn her dentures for the past 2 years due to ill-fit. She attributed the pain to an injury to her lower edentulous ridge after biting on a piece of hard food without her dentures, some one and a half years ago. The pain had since occurred more frequently and gradually worsened. She insisted on showing the clinician her "scar" on the alveolar ridge.

The patient claimed that she was dependant on paracetamol to relieve the pain. Accordingly, she had seen several private dental practitioners and was given oral analgesics and antibiotics, and on one occasion, no treatment was administered as there seemed to be no abnormality.

Intraoral examination revealed that apart from the "scar" she showed (which was actually the lingual residual ridge line), the mucosa was normal (Fig. 1). No other sign or symptom was elicited and there was no pain trigger zone. An orthopantomograph did not show any abnormality of the maxillary and mandible (Fig. 2).

There was no history of chronic headache or migraine. She also did not consume alcohol nor smoke. Other than paracetamol she was not on any other medication. Following the lack of oral clinical sign or symptom relating to her complaint, she was further questioned on the possible precipitating factors. Only then

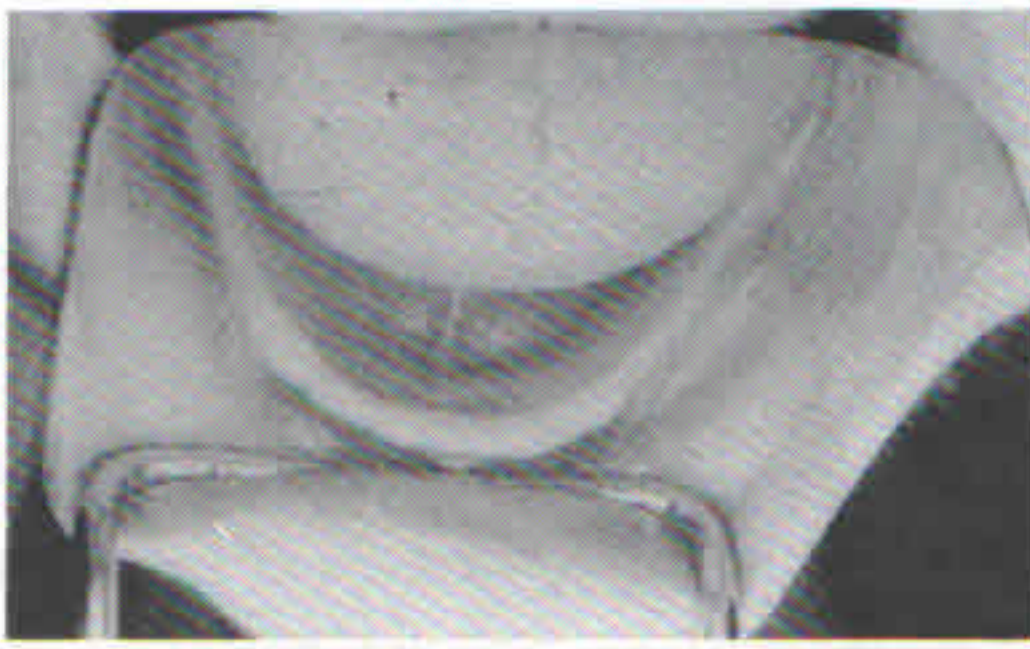


Fig. 1 Normal Mucosa

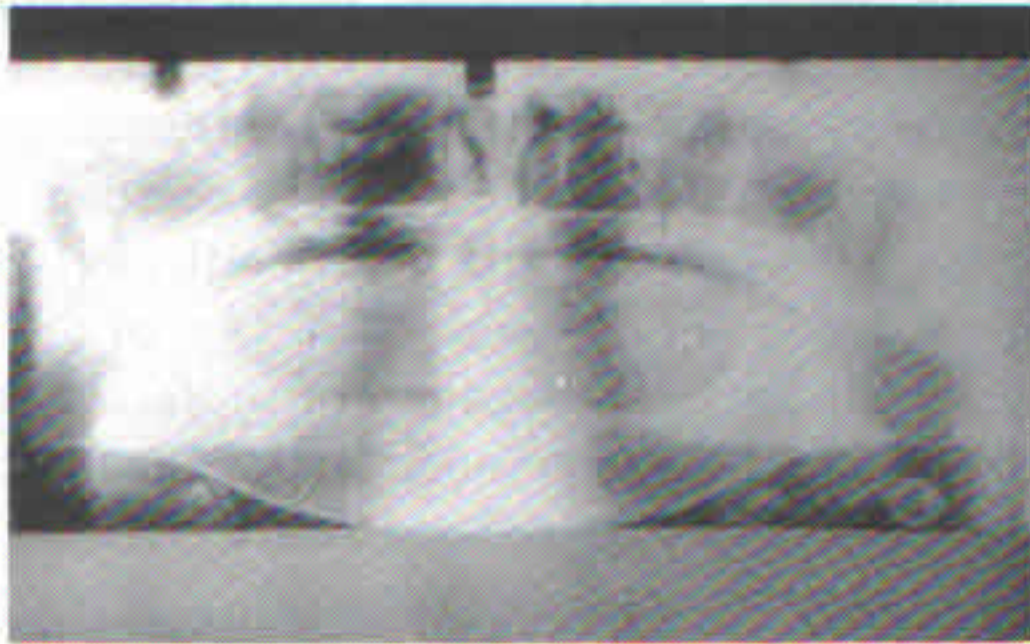


Fig. 2 Normal bony structures

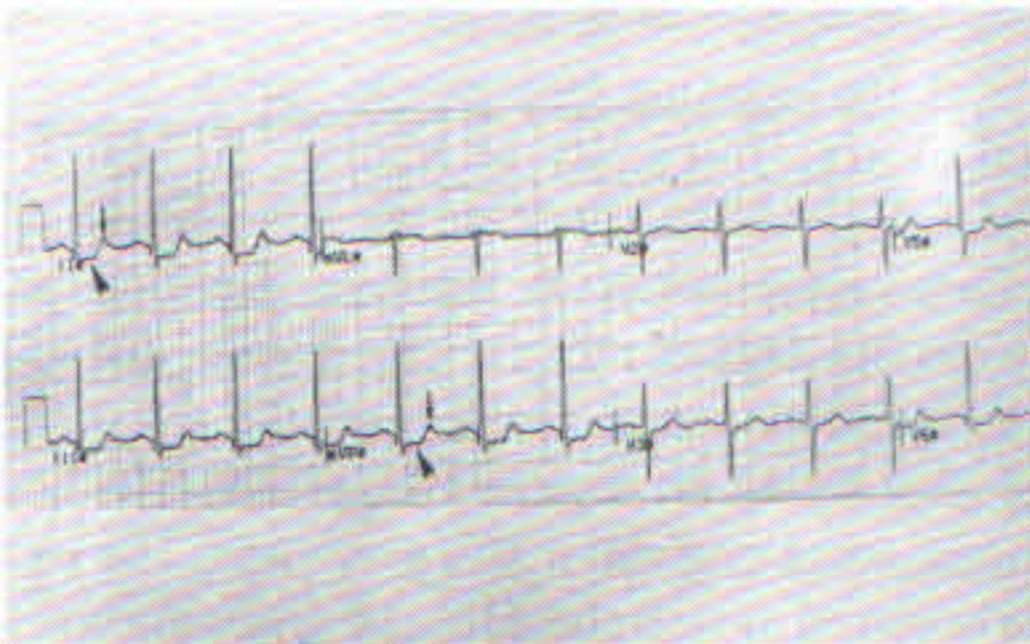


Fig. 3a Positive Exercise Stress Test (ST-segment, T-Wave)
Pre-test : Mild ST-T changes in Lead II, III V5, V6

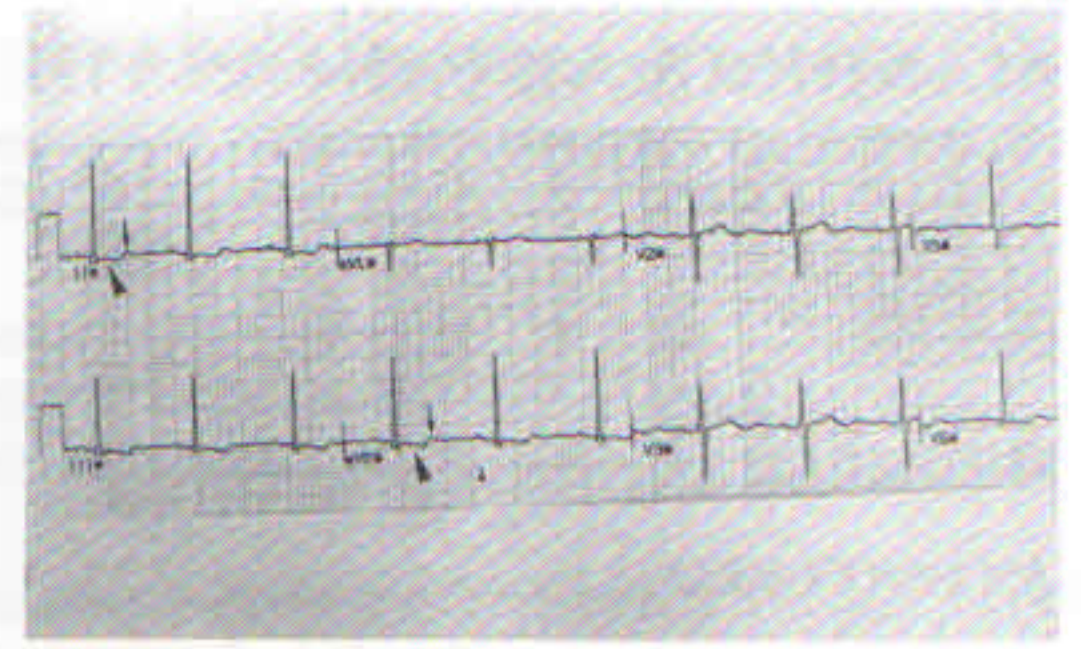


Fig. 3b Peak Exercise (at 3 min 26 sec):
Significant ST-segment depression of 1.5mm
at Lead II, III, V4, V5, V6

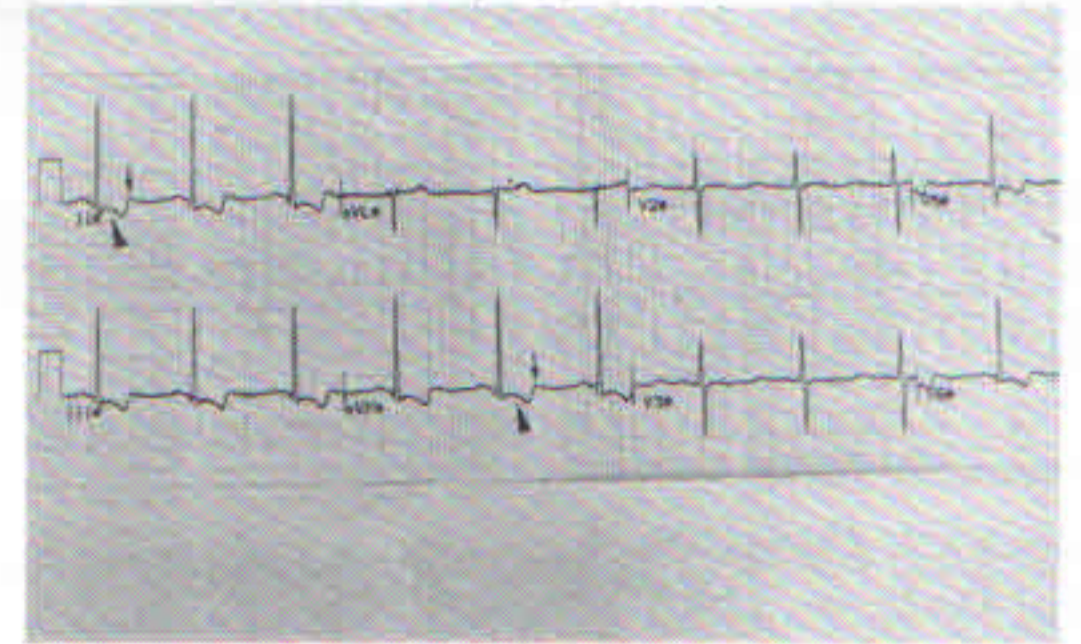


Fig. 3c Recovery Period (at 3 min):
Downsloping of ST-T wave at Lead II, III, V4, V5, V6

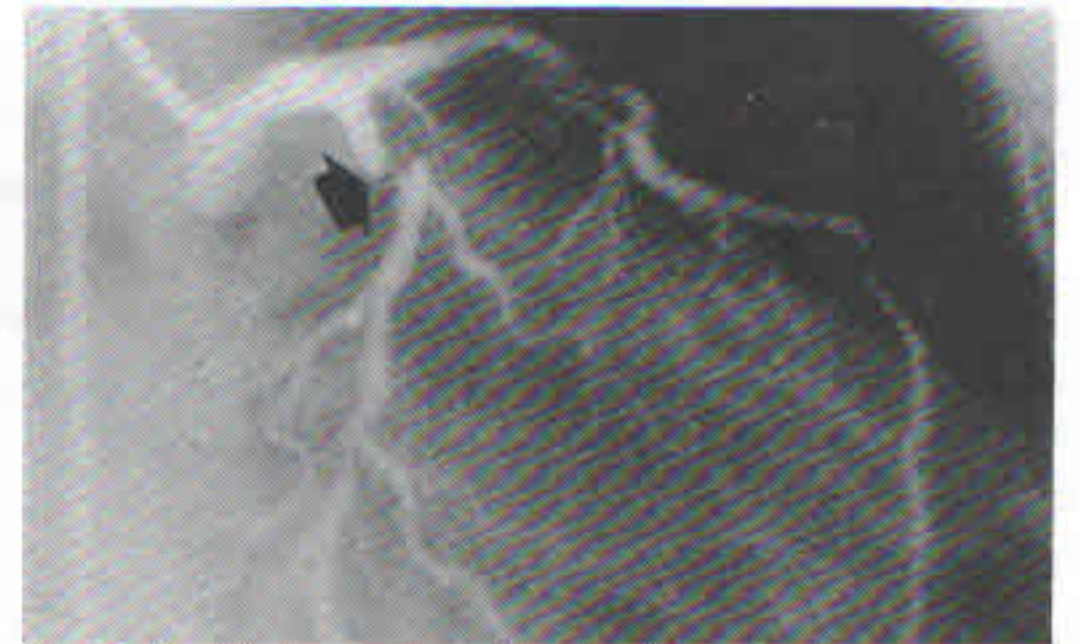


Fig. 4 Left coronary arteriogram showing severe stenosis
of the left anterior descending (→) and
the left circumflex (⇨) arteries.

* Right coronary artery (not in picture) is occluded.

did she reveal that her pain occurred whenever she did her laundry or went for long walks which subsided when she rested. There was no concomitant retrosternal and left shoulder pain.

A provisional diagnosis of ischaemic heart disease was made and she was referred for cardiac evaluation. On clinical examination, her blood pressure was 160/100 mm Hg and pulse rate, 68 per minute. There was no sign of hyperlipidaemia. No cardiomegaly was detected and she was not in heart failure. She underwent an exercise stress test, which was positive for myocardial ischaemia at low work load. During the stress test, she experienced similar pain over the left jaw. This was associated with ST-segment depression on the 12 leads electrocardiogram (ECG) tracings (Fig. 3). She underwent coronary angiogram which showed severe triple vessel disease (fig. 4) and was advised a coronary artery bypass surgery. However, she declined surgery despite failure of adequate anginal symptom relief (i.e. left-sided jaw pain) on maximum oral antianginal medication.

The patient is currently attending the dental clinic here for provisions of a pair of new dentures.

DISCUSSION

Angina pectoris was first described as a symptom of coronary disease in 1802⁴. The chest pain is usually recognized as a sense of chest tightness, i.e. "like a band around the chest". It is also described as a squeezing, burning, choking, heavy feeling or sensation of difficulty in breathing. The pain may radiate to the neck, lower jaw, shoulders, arms, back and epigastrium. It is of brief duration, usually lasting from two to ten minutes. The pain can be precipitated by effort, emotional stress or even after a heavy meal and pain relief occurs within a few minutes of rest or with the use of sub-lingual nitroglycerin. However, not all angina present in the classic manner as described above. In some instances, it may be apparent in any one particular site. However, jaw pain as a sole presenting sign of cardiac ischaemia is

uncommon and if it does occur, the patient would regard it as a pain of dental origin and may seek dental treatment⁶. The case reported here is one such example.

In the event of such an occurrence, it is the responsibility of the attending dental surgeon to obtain as detail a history from the patient on the nature of the pain and also to conduct a thorough oral examination with radiographs, taken to ascertain that there is no dental or jaw condition that could contribute to the pain. It is not uncommon for dental surgeons to associate patients presenting inapparent, subtle pain with emotional and psychogenic distress especially when the clinical investigation yielded no abnormal findings. Identifying this symptom as a possible referred pain of cardiac origin would alert clinicians to these patients for further medical attention and also to enable them to deliver appropriate dental treatment for these medically compromised patients⁷ without the risk of exacerbating the condition.

In this case, it was clinically evident that the mucosa and the underlying bony structures were normal and local causes for the pain were therefore easily excluded. However, this would have been complicated if the patient presented with several restored teeth and also poor oral hygiene. The angina would probably be viewed as pain of odontogenic origin i.e. due to pulpal, periapical or / and periodontal diseases. This may lead to the administration⁶ of unnecessary and complex dental treatment. Hence, a good history taking even in the setting of a busy dental practice is an invaluable tool in helping to obtain a correct diagnosis.

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