Short Communication

Arch bars in the mouth for 17 years – A case report

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ABSTRACT

Arch bars are commonly used in maxillofacial surgery but their intraoral presence for an extremely long period is quite uncommon or rare. So when such a patient reports and denies having any complaints all these years, the question that presents is, how is this possible? What kept the patient so long? A review of the existing literature shows, despite being common in trauma care, failure to follow-up has not received the due attention. This study retrospectively reviews the various factors implicated for failure to follow-up and the proposed corrective measures. The objective is to identify such potential patients beforehand thereby facilitating efficient trauma care.

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Introduction

The application of arch bars in maxillofacial trauma is a common procedure. Their intraoral presence is not a pleasant feeling and the discomforted patient eagerly awaits their removal. Hence, encountering a patient with arch bars for an exceptionally long period evokes an initial feeling of surprise and negligence on part of the patient. Studies, though limited, have shown that poor follow-up rates are not surprising in trauma care. Are the patients solely responsible? Failure to follow-up (FTF)* has been attributed to a variety of factors^{1–4}. Studies have identified the risk factors associated with FTF and proposed measures to control it^{2,3}. It has been concluded that with improved patient education on the day of hospital discharge and improved physician discharge orders, trauma patient follow-up could approach 100%². The unusual case of such a patient lost to follow up is presented herein.

Case report

A 51 year old male patient reported to the OPD with a complaint of mild swelling in the left cheek region since 3 days. Swelling was associated with mild pain that increased with jaw movements, induration in the surrounding area and pus discharge. The patient did not report any other complaint. No systemic illness was reported. Patient gave history of hospitalization at a government

hospital for poly-trauma 17 years ago resulting in fracture of the left leg and mandible. A cast was applied to the leg, MMF with arch bars and elastics was done and patient was asked to report after a month. Admission and discharge details of the same were not available.

Local examination showed dried pus at the complaint site with surrounding induration and erythema. On closer examination a sharp metallic object seemed to be poking through the skin. Subsequent intraoral examination showed the free end of the maxillary arch bar penetrating the right buccal mucosa and eventually perforating the skin. Both the maxillary and mandibular arch bars were loose with several missing wires and the oral hygiene was poor. [Figs. 1 and 2]

On further questioning it transpired that the patient was non-ambulatory for the first few months after trauma and hence could not follow up with the Dental OPD although he did follow up with the Orthopedics OPD for cast removal. The elastics for MMF had either come off or were broken in due course. Also he was never bothered by these and therefore had them on until now.

The arch bars were removed and wound was conservatively managed as it did not require suturing. Antibiotics-analgesics were prescribed with instructions to follow up after 5 days, which the patient never did. Thus, the patient was once again lost to follow-up as the contact details were not available.

1. Discussion

The patient in concern stated his reason for not following up as being non-ambulatory for an initial period of 2–3 months due to the cast applied to the left leg and later never had any complaints.

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Fig. 1. Sharp metallic object seemed to be poking through the skin.

Fig. 2. Free end of the maxillary arch bar penetrating the right buccal mucosa.

This article in retrospect probes the possible reasons for the non-compliance of this patient and also reviews those in the available literature.

Stone CA et al.¹ classified the reasons for non-compliance with follow-up into Hospital (internal) factors and patient (external) factors. Of the patients who did not attend follow up but responded

to the questionnaire, 61% felt that their problem was already resolved. This again reflects a lack of awareness to the need of follow up even when they feel they are 'disease free'. 10% of the patients cited illness for their FTF. The case presented herein conforms to both the above reasons cited by Stone et al.

Aaland MO et al.² in order to improve the follow up at their centre made it mandatory that all patients admitted by the trauma service would have a follow-up appointment with the medical director of the trauma department. Based on a previous study¹ they classified the reasons for non-compliance with follow up into Hospital (internal) factors and patient (external) factors. The most common internal factor was the failure of the discharging trauma surgeon to write an order for follow-up and where the physician wrote the order, the nurse failed to perform it. When the patients could be contacted after discharge, the reasons (external factors) given were distance, illness, no relative/friend, financial difficulties, unaware of appointment, other (work conflicts, wrong office, seeing another physician, and so on). Majority of the patients with external reasons (72%) could not be reached as more than half of the contact information was inaccurate. This, the author proposed, can be avoided by updating the patient contact data at the time of discharge. Also 44.26% of the patients who had FTF with the trauma surgeon visited other sub-specialties (in this case Orthopedics OPD), this helps conclude that the problem is not the patient, rather a lack of understanding of the need for multiple physician follow-up appointments. Again, educating the patient and the family members on the day of discharge could clarify this misunderstanding.

Leukhardt et al.³ in their study determined predictors of patient factors for FTF. Lower income, higher poverty rates, lower education, old age, less severe head and body injury, blunt injury, death after discharge, and patients discharged to home independently were significantly ($P < 0.05$) associated with FTF. An evaluation of discharge summaries and outpatient notes showed significant deficiencies in documentation regarding ambulation, diet, and employment post trauma. Hence, a well documented follow-up as a corrective measure can better assess treatment outcome and correct the deficiencies at discharge.

Malhotra et al.⁴ concluded that a significant proportion of patients with trauma have moderate to severe health-related issues post-discharge that are often not found by the trauma team or the trauma registry. Active follow-up can identify the nature of the medical issues and help in designing system changes to reduce or eliminate them.

In addition to admitting the dearth of studies on reasons for FTF in trauma and their poorly defined potential predictors, Haider AH et al.⁵ listed the indicators for significant need (injury types) for follow up to Plastics and ENT clinics. Many of them overlap with the scope of Maxillofacial surgery.

After reviewing all the factors the most likely reason for our patient's FTF with the initial facility appears to be was the unawareness to the need for it. The patient denied having any complaints but it is possible that the need was not stressed upon enough. He could have been cautioned about the deterioration in oral hygiene and the possible injuries from loose wires and sharp metal. The FTF with us is ironically similar. The contact details were not taken as the need was not felt, though we would like to derive comfort from the notion that the need must have been non-existent.

In conclusion, FTF after trauma is common and to our knowledge no such studies are available in the field of maxillofacial surgery. A sensible step to avoid future deficiencies in trauma care will be to predict them beforehand and take adequate steps to reduce, if not eliminate both hospital and patient factors. Further studies are needed focusing on our speciality and the geographical and cultural factors affecting its practice.

Conflict of interest

None.

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