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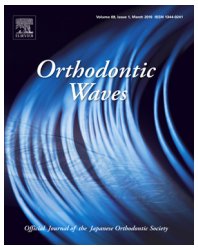

Short communication

Accidental ingestion of fractured part of a pendulum appliance

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ABSTRACT

Purpose: How to deal and the precautions to be taken to avoid any injury from accidental, ingestion of an appliance or a part of an orthodontic appliance during a chair-side procedure or later Case History Patient ingested a foreign body (wire) of orthodontic (pendulum appliance) origin.

Results: The radiographs showed a wire in the lumbar region which was excreted out within 3 days.

Clinical recommendations/conclusion: Constant and proper care of the appliance in every visit.

1. Introduction

Accidental ingestion of an appliance or a part of an orthodontic appliance during a chair-side procedure or later, because of inadequate retention of the appliance, can create a medical emergency that can lead to serious complications, including death from aspiration of the foreign body [1].

The incidence of aspiration or swallowing of foreign bodies of dental origin varies considerably in the literature. Tamura et al. in a review reported the range being 3.6–27.7% of all foreign bodies, the number being considerably higher in adults than children [1]. The incidence of reported cases of aspiration or ingestion of orthodontic appliances is less common, but no less varied in the types of appliance involved. These include swallowing of a transpalatal arch during its removal [2], a lower spring retainer [3], an upper removable appliance [4], a fragment of an upper removable appliance [5], a piece of archwire [6], and expansion appliance keys [7]. This may be an isolated case of fracture of a part of pendulum appliance reported till date.

2. Case history

A 15-year-old girl came to the Department of Orthodontics & Dentofacial Orthopedics for the need of orthodontic treatment. After careful clinical and radiographic evaluation of the

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case the patient presented with an Angle's Class II subdivision malocclusion with highly and labially placed canine in the right side with an acceptable soft tissue facial profile having skeletal class I with average growth pattern. On model analysis the space discrepancy came out to be 6 mm, so we decided to go for molar distalization. This distalization was planned to be done using pendulum appliance [8]. The helix of the pendulum appliance was made by 0.017 in. × 0.025 in. TMA wire. 0.017 × 0.025 TMA was used instead of the original pendulum appliance was using 0.032 round TMA to have a better control and avoid any rotational effect caused because of the round wire.

After 2 activations, i.e. 3 months after starting of the treatment the patient reported of fracture and swallowing of the fractured segment while having her breakfast. On clinical examination it was seen that the helix of the right side was missing in patient's mouth.

3. Follow up of accidental ingestion

The patient was rushed to the radiology department and first a PA view of erect chest (Fig. 1) was taken to check the position of the fractured wire part of the appliance. But nothing was seen in the X-ray. So it was decided to go for another radiograph, i.e. AP view of erect abdomen. On viewing the X-ray the wire was seen in the lumbar region (Fig. 2). On clinical and radio graphical examination we found that the patient had swallowed the active helix part of the pendulum which fractured while chewing. After consulting the medical team it was decided to monitor the patient and repeat the radiographs after 3 days and the wire was expected to be excreted out. So the AP view of erect abdomen was repeated after 3 days (Fig. 3). On viewing the radiograph there was a clear view suggesting there was no wire and that it was excreted out as expected (Fig. 4).

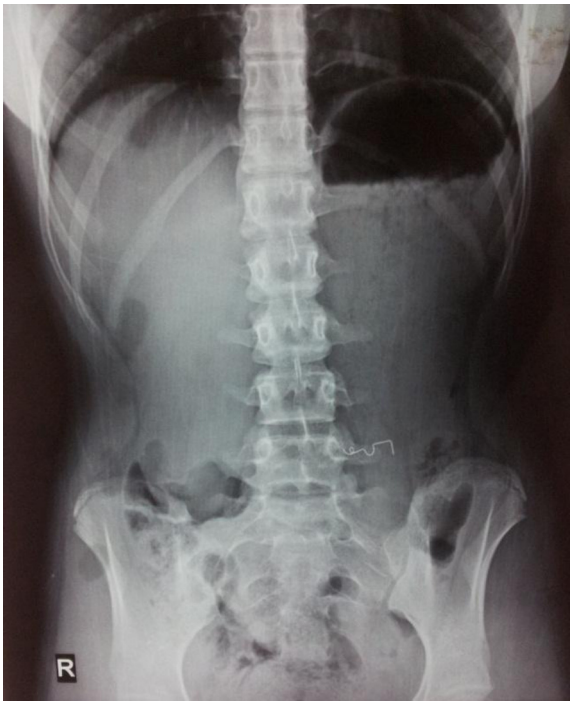

Fig. 2 – AP view erect abdomen.

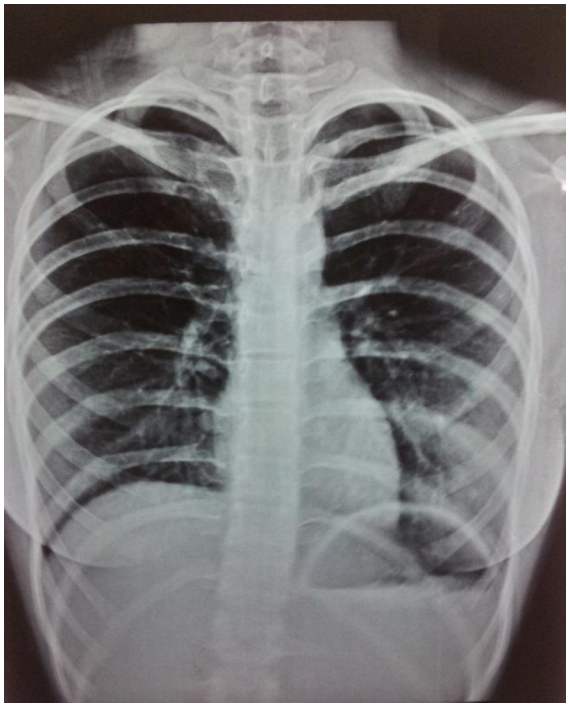

Fig. 1 – PA view erect chest.

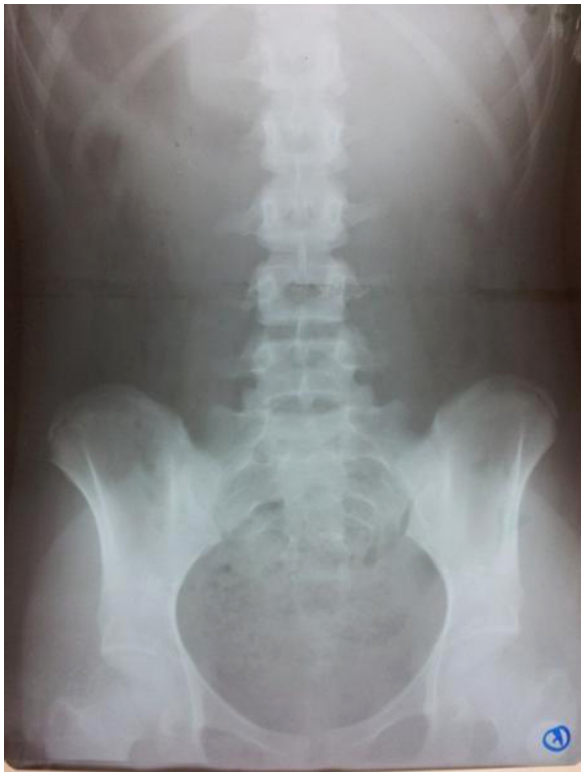

Fig. 3 – AP view erect abdomen after 3 days.