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Accidental Swallowing of a Single Tooth Metal Crown of a Tooth in 38 Year Old Male Patient: A Case Report

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ABSTRACT

Aspiration or ingestion of the foreign body is one of the serious emergency situations in dental practitioner's point of view. Various dental materials, appliances or instruments which are smaller in size and other foreign bodies can come under this category. Foreign body ingestion or aspiration should be looked seriously, as complications can arise and patient may also require immediate surgical interventions in certain conditions. Every dental practitioner should know the basic management protocol for such situations. The present article reports a case of accidental ingestion of the metal crown, while removing on the dental chair.

Key words: Dental practitioners, Foreign body aspiration or ingestion, Metal crown

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INTRODUCTION

In the dental setup, among various emergencies, foreign body aspiration or ingestion is one of the rare and complicated emergency situations. Foreign body ingestion is an act of ingestion of the foreign body whether of dental origin or other external origin into the gastrointestinal tract. While, the act of the foreign body aspiration is breathing or inhalation of the foreign body into the respiratory tract (Ali et al., 2014; Rastogi et al., 2014).

Most commonly these are seen in children as compared to adults and these are seen when dental practitioner fail to isolate the operative field form the rest of the oral cavity during the dental treatment procedures (Ali et al., 2014). The ingestion of the foreign items is more commonly seen in case of patients with some psychiatric disorders, mentally retarded patients, patients under local anesthesia or intravenous sedation (Parolina et al., 2009).

Among the numerous incidences recorded in the previous literature, foreign bodies of fixed prosthodontic therapy had the highest number of incidents with adverse outcomes. Also the dental treatments involving single tooth prefabricated or custom made crowns had the highest number of incidents (Venkataraghavan et al., 2011).

Hereby, we are presenting a rare case report of the ingestion of the single tooth metal crown in a 38 year old male patient.

CASE REPORT

A 38 year old male patient reported to the private dental clinic at Sikar (India) with a complaint of the pain in the permanent maxillary second molar of the left side, which was root canal treated and had metal crown. After taking radiograph, the dentist found that the root canal treatment was not done properly and the obturation was insufficient. Thus the dentist had decided to remove the metal cap and do the endodontic treatment again. However, while removing the metal cap with the crown remover, the patient had accidently swallowed the metal crown (Figure 1).

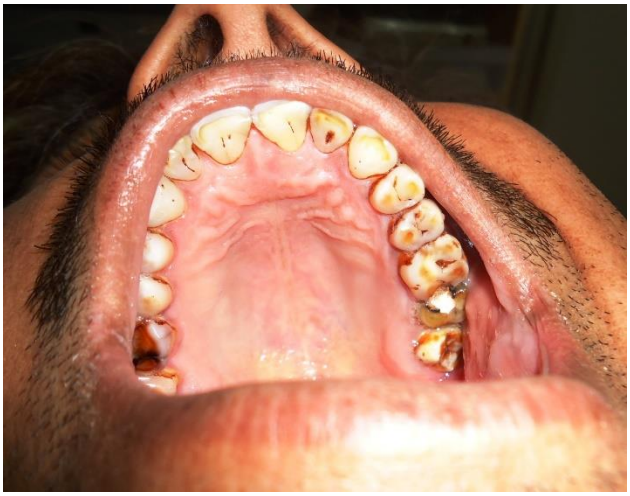

Figure 1: The root canal treated permanent maxillary second molar tooth of left side without the presence of the metal crown, which was accidently ingested by the patient

Considering the seriousness of the situation, the dentist had thoroughly checked the oral cavity for the presence of the crown, but the crown was not found. The dentist kept on monitoring of the patient, whether he had any symptoms. Meanwhile the dentist had taken the patient to the nearby radiologist and taken the X-ray of the chest and the abdomen. The radiograph showed the position of the metal crown at the lower end of the pelvis (Figure 2).

Figure 2: Abdominal X-ray showing the presence of the metal crown at the lower end of the pelvis. Note the radiopaque metal crown

The patient was hospitalized and as the patient was not having any symptoms, it was decided to wait and watch. Next day, the stool was checked thoroughly for the presence of the metal crown and the X-rays were repeated. In the next

radiographs, the metal crown was not present as it was passed spontaneously thorough the gastrointestinal tract (Figure 3). The patient was discharged after confirmation and follow-up was done after 1 week.

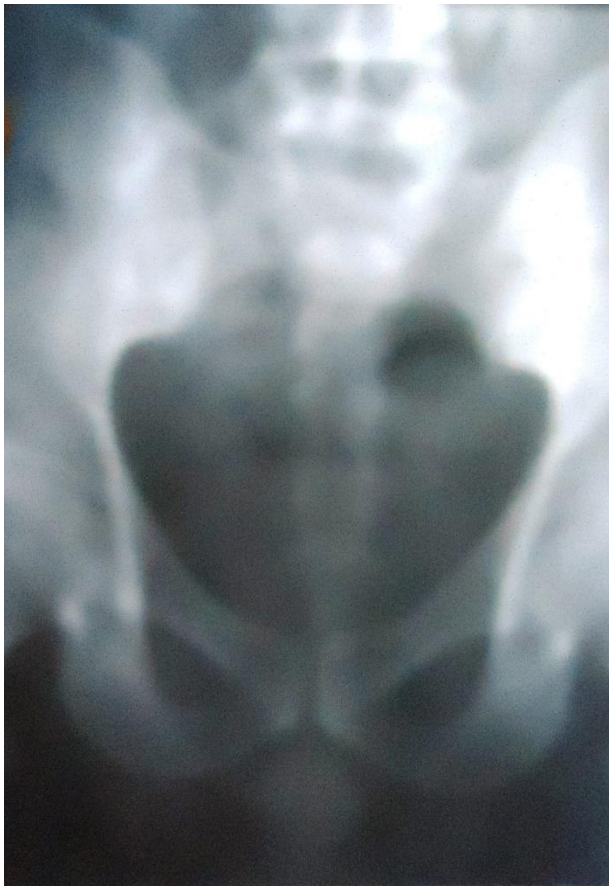

Figure 3: Abdominal X-ray of the next day, showing the absence of the radiopaque crown which was spontaneously passed through the stool

DISCUSSION

Ingestion of the foreign body is one of the emergency situations occurring in the dental clinics (Venkataraghavan et al., 2011). Any object can be ingested which are usually placed into or removed from the mouth during various operative procedures. These may include extracted teeth, artificial crowns, dental bridges, dental floss, removable dental prosthesis, endodontic files or reamers, orthodontic instruments or materials, restorative materials, parts of implants, rubber dam clamps, impression materials, etc (Ali et al., 2014; Rastogi et al., 2014; Parolina et al., 2009; Amarlal et al., 2009).

The incidence rates of the aspiration or ingestion of the foreign bodies of the dental origin in the literature varies considerably, ranging from 3.6 to 27.7 % of all the foreign bodies (Panse et al., 2012; Tamura et al., 1986).

Foreign bodies that are ingested into the gastrointestinal tract pass spontaneously in majority of the cases. But in around 10-20 % of the conditions requires nonsurgical intervention, while in about 1 % of the cases may require surgery (Khouri and Dababneh, 2004).

Patients are usually asymptomatic after ingestion of the foreign body, but in certain cases symptoms can arise after some duration (Khouri and Dababneh, 2004). The foreign bodies can damage the gastric mucosa, intestinal mucosa and may cause septic abscess or intestinal perforations (Rastogi et al., 2014).

For such conditions to manage, first important step is to diagnose it and assay the placement of the foreign body. For this purpose, patient's thorough history, complete physical examination and various types of the radiographs are important. Form this shape, composition and confirmation of the position of the foreign body can be judged (Rastogi et al., 2014).

Early assessment of the location of the foreign body will help appropriate, timely management and referral of the patient (Venkataraghavan et al., 2011).

Management of these situations are very important and dentists should be alert to the signs and symptoms of the patients and in case of emergency should provide immediate and appropriate treatment until the arrival of the emergency support (Obinata et al., 2011). If a dental practitioner happens to face this type of emergencies, the first step should be not to panic but to carry out the immediate management procedures in a systematic manner (Amarlal et al., 2009).

At present, there are no clear guidelines that whether the ingested foreign body in the gastrointestinal tract should be managed conservatively or surgically (Venkataraghavan et al., 2011). The surgical intervention is indicated only if patients develops significant symptoms or if the foreign body fails to progress through the gastrointestinal tract (Venkataraghavan et al., 2011).

CONCLUSION

In majority of the times, the ingested foreign bodies of the dental origin pass asymptomatically and atraumatically. However, the dental practitioner should be aware the associated risk, complications and management of such conditions. Also, dental practitioner must know the essential steps to handle such emergencies.

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