

Accidental Swallowing of a Rubber Dam Clamp by a 4.5 Years Old Child: A Case Report

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Abstract

Introduction: Ingestion of a rubber dam clamp is a very rare condition that occurs due to careless manipulation of a rubber dam insertion especially in pediatric dentistry.

Case report: The present paper reports a case in which a rubber dam clamp was accidentally swallowed by child undergoing pulpotomy in his upper right deciduous second molar, which entered esophagus and got stuck supraclavicular.

Discussion: Ingestion of foreign materials may cause serious complications. Owing to the shape and sharpness of the instrument, there are chances of perforation. Once the instrument is lost in the oropharynx, it is very important to determine whether the instrument has entered the digestive tract or respiratory tract.

Conclusion: Dentist should be able to manage an emergency situation, in which patient accidentally swallow a dental instrument

Keywords: Case report, Foreign body ingestion, Mishaps, Rubber dam clamp, Pediatric dentistry

Introduction

Ingestion of foreign body is a common clinical problem in children. Ingestion still occurs in adults but most of the time occurs accidentally or in psychiatric patients. In dental operator, the ingested foreign body may be teeth, restorations, restorative materials, instruments, rubber dam clamps and so forth [1,2]. Grossman determined that 87% of ingested foreign bodies entered the gastrointestinal tract, and 13% entered the respiratory tract [3]. Most of the foreign bodies that entered the gastrointestinal tract pass out spontaneously. Only 10-20% cases require nonsurgical intervention, and 1% or less requires surgical removal. This paper discusses a case report of accidental ingestion of a rubber dam clamp and its management.

Case Report

A 4.5 years old male child came to a pediatric dental clinic suffering from pain on his upper right quadrant, upon clinical examination, a badly decayed upper right second deciduous molar was found that need pulpotomy, a #8 Satin Steelrubber dam clamp as seen in Figure 1 [1] was seated inside patient mouth followed by a rubber dam sheet or not secured with a dental floss. The patient moved unexpectedly and the clamp jumped into his throat.

Patient was instructed to cough forcefully, but clamp could not be retrieved. Thorough examination was done using tongue depressor but was not productive. There was no evidence of airway compromise, respiratory distress, or abdominal tenderness. Parents were informed about the accident and were assured.

Chest and abdominal radiographs were taken and the clamp was detected in chest radiograph supraclavicular as seen in Figures 2 and 3. The patient was referred to Department of Ear Nose and Throat at the Hospital of Alexandria University and the clamp was removed under general anesthesia using a laryngoscope as illustrated in Figure 4 without any evidence of trauma after removal.

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Figure 1: The swallowed rubber dam clamp.



Figure 4: The laryngoscope device.



Figure 2: Lateral view of the swallowed rubber dam clamp.



Figure 3: Frontal view of the swallowed rubber dam clamp.

Discussion

Ingested foreign bodies that lodge into gastrointestinal tract pass through the tract within a few days to a month. When such cases are not diagnosed or treated appropriately, it may cause serious complications. Owing to the shape and sharpness of the instrument, there are chances of perforation. Once the instrument is lost in the oropharynx, it is very important to determine whether the instrument has entered the digestive tract or respiratory tract. Radiographic examination with posteroanterior and lateral chest radiograph, abdominal radiograph is mandatory for determining the location, size, and nature of the ingested foreign body. In the current case, chest radiograph was advised as patient was complaining of something sticking in his throat. In case of radiolucent foreign body, other diagnostic methods include computed tomography and magnetic resonance imaging [4,5].

Entry of a foreign body to the respiratory tract is potentially life-threatening, and the object requires prompt removal. Vigorous and spasmodic cough and difficulty in breathing frequently occur immediately; however, a period without symptoms can last for years. The most common signs and symptoms of foreign body aspiration include coughing, wheezing, and decreased breathing sounds. Foreign bodies tend to be lodged preferentially in the right bronchial tree because of its anatomical vertical position.

To overcome that situation, rubber dam clamp must be secured with a dental floss [6].

Conclusion

Handling of dental objects requires particular care, especially where the patient is supine or semi supine. Dentist should be able to manage an emergency situation, in which patient accidentally swallow dental instrument, special care should be given while handling such pediatric cases. Keep in mind the strategies to prevent aspiration/ingestion is mandatory; Use

a rubber dam, use a gauze throat pack, use floss to tie dental instruments, use high vacuum evacuation, use a high viscosity type of impression material, use a custom tray, with an open palate design for maxillary arch impression, observe the entire impression procedure, use a more upright position if possible, provide thorough instructions to the patients, proper checkup of the instruments like aerators before use.

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