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Abstract
Ingestion and inhalation of a foreign body are among the most frequent causes of emergency department visits, associated with high morbidity and mortality. Radiographic examinations are a major contribution to the diagnosis of the foreign body ingested or inhaled and their possible complications. Approximately 80-90% of the foreign bodies ingested pass through the entire digestive tract and be expelled rectally without causing problems. It is a case of fixed dental prosthesis, of three elements, swallowed during sleep. The abdominal X-ray showed the presence of a radio-opaque foreign body in gestic projection. This body represented a metallic prosthetic part.

The radiological analysis of the gastrointestinal tract constitutes a complement of great value in the diagnosis of a dental fixed prosthesis swallowed. A systematic radiological assessment with chest radiographs, abdominal unprepared and cervica spine should be performed. They make it possible to delocalise the foreign body if it is radio-opaque, to determine its size, its nature, to detect any complications, to monitor its progression in the digestive tract.

Keywords: Dental radiology, Knowledge, Odontology

Introduction
Ingestion and inhalation of an object are among the most frequent causes of emergency department visits, associated with high morbidity and mortality [1]. Parts, meat bones, marbles, safety pins, buttons, batteries, and screws are among the most common foreign objects in children [2]. In adults, parts and dentures are the most frequently swallowed. Approximately 80-90% of the foreign objects ingested pass through the entire digestive tract and be expelled rectally, without causing any problems [3]. If the ingested object is not removed, it can cause serious complications such as oesophageal erosion [3-5], perforation, abscess, intestinal occlusion. Partial dental prostheses can penetrate the hypopharynx, esophagus or lungs and cause perforations with their pointed teeth [4,5]. Radiographic examinations are a major contribution to the diagnosis of the foreign body ingested or inhaled and their possible complications. It is a case of the fixed dental prosthesis, three elements, swallowed.

Description of the Case
Patient Jk aged 54 years well-behaved came to emergency consultation following a dental prosthesis accident unsealed during sleep. During the interrogation, he described that the prosthesis had been in the mouth for 6 years. The prosthesis had a moderate mobility in recent months. It was around 5 am during the sleep that he woke up and realized that he had no longer the prosthesis in mouth. He does not describe any pain, cough, or breathing or swallowing. He presented himself in consultation immediately at 8 o'clock in the dental office. Exo-buccal examination shows no damage to the integuments or visible lesions. The endobuccal examination revealed an end of the 21, the stumps of teeth 22 and 11 and confirmed an absence of the dental prosthesis in the patient’s mouth. The rest of the endobuccal examination showed nothing special. The upper aerodigestive tracts were well clear; no haemorrhage or ulceration of the mucous membranes. Two X-ray examinations, chest radiograph (Figure 1) and abdominal without preparation (AwP) side (Figure 2) were requested. The chest X-ray showed the upper aerodigestive tracts as well of the bronchi and pulmonary alveoli. No obstacle of the tracks was noted. The abdominal radiograph showed the presence...
inhalation of objects often causes complications, which can threaten the patient’s life-threatening prognosis. The introduction of the object into the bronchi causes respiratory difficulties with a risk of infectious complications. Bronchotomy by open surgery is often the proposed treatment if manual extraction is not possible [12,13].

Careful examination as well as clinical suspicion is necessary for the diagnosis and early management of ingestion of foreign bodies [7]. A better understanding of the epidemiology and the possible consequences of such events could lead to more appropriate design of dental prostheses and therefore to reduce these risks. The replacement of teeth is performed to improve masticatory efficiency and aesthetics, to reduce mesial drift, to erase the opposite tooth and to restore phonetics [3]. An appropriate prescription for tooth replacement takes into account many factors, including the aesthetic requirements of the patient, the amount of alveolar bone remaining, the dental health of the remaining teeth, and the financial cost [8].

Assessing a patient’s risk of ingesting or inhaling a particular dental prosthesis is also an important part of this process. Its design and construction meet technical requirements for sustenance, stabilization and retention. Once a prosthesis passes back into the oropharynx, or into the hypopharynx, it can either continue in the aerodigestive system or be expelled to the oral cavity by the reflex. Any factor that inhibits the reflex can reasonably be considered to increase the risk of ingestion or inhalation of a dental prosthesis. Such factors may include neuromuscular disorders multiple sclerosis or Parkinson’s disease. From the hypopharynx, the prosthesis can pass into the larynx, then into the respiratory system, or it may enter the esophagus. In the larynx, the vocal cords can prevent further penetration. From there the most direct path is in the right bronchus, and then, according to the size, in the bronchioles. The stomach has few obstructions to the foreign body, although the small intestine gradually decreases in diameter until the ileo-caecal valve [8]. Other obstructions can be caused by malignant lesions in the large intestine.

The radiological analysis of the gastrointestinal tract constitutes a complement of great value in the diagnosis of a dental fixed prosthesis swallowed. A systematic radiological assessment including thoracic radiographs (face and profile), abdominal without preparation (SPA) and cervical spine (face and profile) must be performed. They make it possible to delocalise the foreign body if it is radio-opaque, to determine its size, its nature, to detect any complications, to monitor its progression in the digestive tract [10]. The scanner is very effective in detecting radio-transparent foreign bodies. It also makes it possible to detect associated inflammatory or abscessed lesions. It is the examination of choice to demonstrate the hemorrhagic complications and the liquid or gaseous effusions [11].

The complications are infrequent, if they happen, they can be life threatening: cardiac involvement at the time of penetration or by total obstruction of the larynx respiratory complications, retropharyngeal abscesses, local infections, digestive obstructions, The perforations are more rare [3,5,11,14].

Conclusion

Diagnosis of swallowed or inhaled dentures is often difficult. Conventional radiology can be a great contribution to the diagnostic difficulties by highlighting the foreign body of a radio-opaque foreign body in a grenic projection. This body represented a metallic prosthetic part. The conclusion is that the sealed fixed prosthesis was swallowed and was found in the small intestine. The patient was reassured and advice was given to eat fiber foods and monitor for 2 to 4 days stools to check the elimination of foreign bodies. On the 3rd day, the prosthetic part was eliminated by the stool. A new fixed prosthesis was adapted again to allow the patient to regain the anesthetic, masticatory functions.

Discussion

Ingestion and inhalation of foreign dental objects are often reported in the literature [1-11]. Ingestion is more frequent than inhalation and is generally observed in the elderly [6,7]. However,
radiopaque nature and by allowing to monitor its progression in the digestive tract.

References


