

Case Report

Oesophageal Perforation Due To Impaction of Dental Foreign Body Material

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Abstract

Oesophageal perforation due to foreign body ingestion mainly seen in children and is rare in adult population. In adults, involuntary ingestion of foreign body usually occurs due to some predisposing factors. Ingestion of dental implant causing esophageal perforation is rare. Our patient is a 50 year old male with history of dental implant ingestion. On attempt of endoscopically removing the implant, impaction of implant occurred leading to perforation of cervical oesophagus. The clinical picture further complicated with formation of pneumomediastinum, mediastinal collection and subcutaneous emphysema.

Keywords: Oesophageal perforation; Cervical oesophagus; Dental implant

1. Case Report

A 50 year-old male patient with no known co-morbidities came to the emergency department with history of dental implant ingestion during breakfast. Endoscopy was planned to remove the implant under general anaesthesia,

however the implant got impacted in the cervical oesophagus during manipulation. Patient started complaining of marked chest pain and dyspnoea after the endoscopic procedure. Contrast enhanced CT of neck and chest done (Figure 1A), which revealed a 13 mm sized metallic foreign body impaction in upper-oesophagus at C7-T1 level (white arrow), with focal defect in right lateral wall at this level leading air containing collection in the paraesophageal region extending into the mediastinum (black arrow) and right pleural cavity with subcutaneous emphysema (white arrowhead) in neck. The patient was started on antibiotics and drainage of mediastinal air containing collection with 10F pigtail catheter placement was done under CT guidance (Figure 1B). Patient was taken for surgery after 2 days, and the impacted implant was extracted successfully. The post-op course of the patient was uneventful.



Figure 1: Contrast enhanced CT reformatted sagittal image (A) revealed metallic foreign body (white arrow) impacted in the upper oesophagus, mediastinal air containing collection (white arrowhead) and subcutaneous emphysema (black arrow), (B) axial reformatted CT image showing a drainage catheter in mediastinal collection.

2. Discussion

Foreign body ingestion is more common in pediatric age group as compared to adults. In children, the ingestion of foreign body is usually accidental whereas in adults, the involuntary ingestion of foreign bodies are mostly associated with some predisposing factors like psychiatric disturbances or presence of denture in elderly people with decreased oral tactile sensations [1]. The types of ingested foreign body differ among different age groups. The most common type of ingested foreign bodies in adults are meat or fish bones. Dental implant rupture and ingestion can be rarely seen and are more common in elderly edentulous people [2]. Foreign body impaction could lead to oesophageal perforation which could further complicate the clinical picture causing pneumomediastinum and mediastinal infections. The clinical outcome is detrimental due to several various complications associated with it such as subcutaneous emphysema, pneumothorax, pneumopericardium, sepsis and multiorgan failure. Combination

of various surgical and nonsurgical treatment options should be considered. Therapeutic strategies depend upon the type of foreign body, symptoms of patient, location of perforation, time lapse between the perforation and intervention, and the patient's physical condition. The aim is to cure the infection either with antibiotic coverage or combining it with debridement and drainage to prevent any further contamination and ultimately closing the perforation with endoscopic or surgical approach [3].

References

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