

## Curious Odyssey of Teeth Through Body Spaces: Report of a Rare Case

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### ABSTRACT

Foreign bodies in the liver following accidental ingestion, although rare, have been described in literature. In most of the cases, adults may swallow the foreign bodies which reach the liver by penetrating stomach, colon or duodenum and the most common site being left lobe. Two teeth reaching the bronchus and the liver simultaneously, that too the second one in the right lobe of liver following endotracheal intubation is a rare event and never reported in literature, here we are presenting one such case.

**Keywords:** Tooth, Foreign Body, Endotracheal Intubation, Liver, CT.

### INTRODUCTION

A 68 year old male patient with history of coronary artery disease came with complaints of fever and abdominal pain of 3 days duration. His routine investigations revealed elevated total count of 27200 and mildly raised total bilirubin of 4g/dl and conjugated bilirubin of 2 g/dl. He was subjected to plain and contrast CT evaluation of abdomen. The CT images showed (Figures) showed well defined hyperdense focus of average attenuation 1800-2200 in segment 7 of liver with peripherally enhancing hypodense lesion in right sub diaphragmatic area- abscess adjacent to hyperdense focus. Similar hyperdense focus of average attenuation 1800-2100 was found in truncus basalis of lower lobe of right lung. Suspected as metallic foreign body with sub diaphragmatic abscess, but no relevant history of trauma or accidents.

On probing further, he gave history of acute coronary syndrome 4 months back following which he was resuscitated and mechanically ventilated. Once he was out of the acute stage of the disease he noticed two missing teeth, the canine and first molar. He was subjected to fibre-optic bronchoscopy which revealed tooth in posterior segment of right lower lobe bronchus which was later removed by rigid bronchoscope. Removal of the tooth in liver was not attempted as his symptoms got relieved with conservative management.

### DISCUSSION


Tooth aspiration in adults during endotracheal intubation is very rare. The risk factors include old age, loose teeth, difficult

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intubation etc. which predispose patients for tooth aspiration in tracheobronchial tree in emergent endotracheal intubation.<sup>1</sup> Aspirated foreign body commonly gets lodged in the right main bronchus of lung. In our case tooth was lodged in posterior basal segment of right lower lobe.

Accidental ingestion of foreign bodies is not a rare event. Majority of the ingested foreign bodies pass through the gut within a week, without any significant complications.<sup>2-4</sup> Perforation occurs in less than 1 % of all cases of ingested foreign bodies, the common sites being pylorus, duodenum, duodenojejunal flexure, ileocaecal region and any sites of developmental anomalies such as meckels diverticulum or a site of previous gastric surgery.

Most hepatic foreign bodies result from perforation and transmigration from lumen of gut. Such perforation and transmigration commonly occurs at the gastric wall and hence reach the left lobe of liver.<sup>5</sup> The complications include localized peritonitis, abscess formation, inflammatory mass, hemorrhage or fistula.

In our case tooth was detected in the right lobe of liver. The most likely path of the tooth in our case seems to be via tear in the gastro esophageal junction which occurred due to spasm of lower oesophageal sphincter at the time of resuscitation during the episode of acute coronary syndrome. The foreign body after perforation of the right lateral wall of oesophagus tracked through the right crus of diaphragm, and reached the adjacent part of segment 7 of liver.



Figure 1: Scanogram showing radio dense focus overlying the liver shadow at the level of T10 vertebral body.

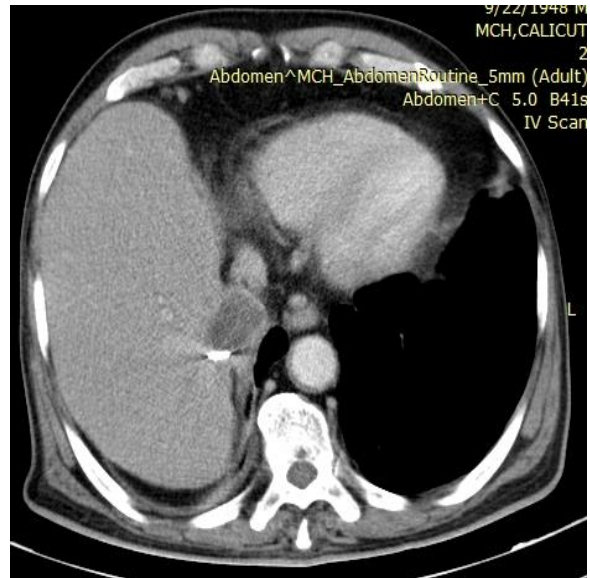


Figure 2: Axial CT post contrast images at the level of liver shows peripherally enhancing right subdiaphragmatic abscess with adjacent well defined hyperdense focus of average attenuation 1800-2000 in segment 7 of right lobe liver.



Figure 3: Axial post contrast CT sections at the level of left atrium showing well defined hyperdense focus of average attenuation 1800-2100 in truncus basalis of right lower lobe bronchus.

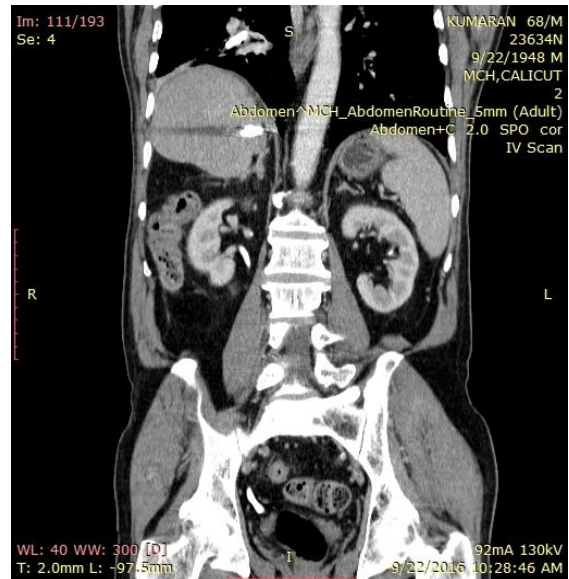


Figure 4: Coronal post contrast CT sections showing the hyperdense foci in truncus basalis of right lower lobe and in segment 7 of right lobe of liver.



Figure 5: Fibre optic bronchoscopic image showing the tooth lodged in posterior segment bronchus of right lower lobe.



Figure 6: The image shows tooth which was removed by rigid bronchoscopy.

## CONCLUSION

Ingested particles reaching the body spaces though not uncommon can have varied presentations. Such cases presenting at a later stage with nonspecific symptoms can pose a diagnostic dilemma. A thorough lookup into the history, previous medical records along with a detailed radiological evaluation can aid in the diagnosis and adequate management of such cases.

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