

Case Report

Cricoid cartilage ossification confuse as an oesophageal foreign body: a case report

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Received: 26 June 2022

Accepted: 18 July 2022

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ABSTRACT

Ossification of laryngeal cartilages usually begins at the age of 20 years in males and at the age of 22 years in females. Ossification in the cricoid cartilage begins from behind to forward. Oesophagus is one of the most common sites for the foreign body. The most common cause of impaction in adults is a meat bolus. A case of 37 years female presented with feeling of pricking sensation in the throat after eating chicken meat which was associated with difficulty in deglutition. X-ray of the neck in antero-posterior view and lateral view was done which showed radio-opaque shadow in front of C6 vertebrae. Rigid oesophagoscopy under general anesthesia was done based on clinical and radiological findings. On rigid oesophagoscopy, foreign body was not seen except minimal injury on the mucosal wall which was 15 cm from the upper incisors. What we can conclude from our case is that, it is always better to confirm a diagnosis of suspected foreign oesophagus with a CT-Scan or Upper GI endoscopy if available to avoid an unnecessary interventions and suffering of patients.

Keywords: Oesophagoscopy, Computed tomography, Foreign body

INTRODUCTION

The cricoid cartilage is a hyaline cartilage ring that fully encircles the trachea and forms the inferior-most boundary of the laryngeal skeleton. The term “cricoid”, refers to the signet-ring resemblance. Cricoid cartilage has a narrow arch anteriorly, which widens into a broad lamina posteriorly behind the airway. The cricoid cartilage helps to maintain airway patency, forms a part of the larynx and provides an attachment for key muscles, ligaments, and cartilage, which help in the opening and closing of the vocal cords for the production of sound.¹

As a person ages, the hyaline cartilage changes from being soft and flexible to hard and more calcified.² Ossification of laryngeal cartilages usually begins at the age of 20 years in males and at the age of 22 years in females. Ossification in the cricoid cartilage begins from behind to forward.³

Oesophagus is one of the most common sites for the foreign body. The most common cause of impaction in adults is a meat bolus. The esophagus has 3 areas of physiologic narrowing that is the upper esophageal sphincter (UES) which includes the cricopharyngeus muscle, the middle esophagus where the esophagus crosses over the aortic arch and the lower esophageal sphincter (LES).⁴ These sites are the most common site for the foreign body obstruction.

CASE REPORT

Patient information

A case of 37 years female presented with feeling of pricking sensation in the throat after eating chicken meat which was associated with difficulty in deglutition.

Clinical findings

On examination there was tenderness over the neck, on indirect laryngoscopy there was pooling of saliva over the pyriform sinus.

Diagnostic assessment

X-ray of the neck in antero-posterior view and lateral view was done which showed radio-opaque shadow in front of C6 vertebrae (Figure 1). Computed tomography was not done as the patient was stable. Upper gastrointestinal endoscopy was also not performed as the procedure required polymerase chain reaction test for COVID-19 which had long waiting hours.



Figure 1: X-ray soft tissue neck lateral view showing suspected foreign body at the level of C6.

Therapeutic intervention

Rigid oesophagoscopy under general anesthesia was done based on clinical and radiological findings. On rigid oesophagoscopy, foreign body was not seen except minimal injury on the mucosal wall which was 15 cm from the upper incisors but Intra-operative C-arm fluoroscopy showed radio-opaque shadow at the same level (Figure 2).

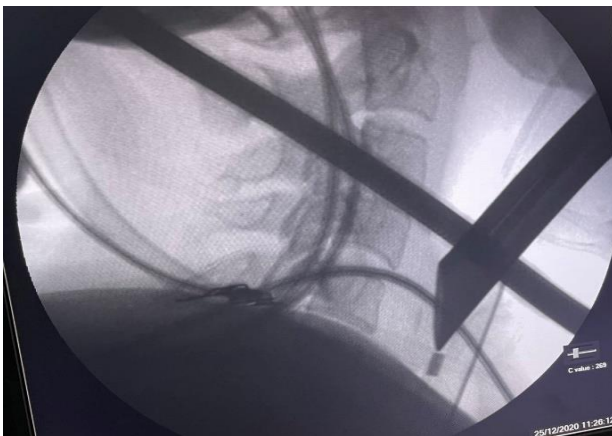


Figure 2: Intra-operative C-arm Fluoroscopy showing cricoid shadow mimicking the foreign body.

As the intraluminal visualization through rigid oesophagoscopy didn't reveal any foreign body, CT-scan was done which showed calcification of the cricoid cartilage at the level of C6 (Figure 3). Hence, the diagnosis of cricoid cartilage calcification was made and patient was discharged the following day.

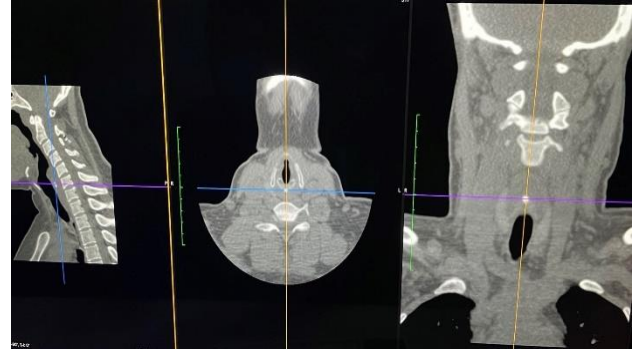


Figure 3: CT-scan of the neck showing calcification of cricoid cartilage.

Follow up and outcome

As we finally decided to keep the patient in the ward for observation. Her symptoms improved as she slowly started drinking water and eating food. We then discharged her from the hospital.

DISCUSSION

Foreign body oesophagus is one of the most common emergency conditions encountered in the ENT department. The upper esophageal sphincter is one of the common sites where foreign bodies get impacted.⁵ The cricopharyngeal junction is at the level of C5-C6 which is similar to the cricoid cartilage level that is C6. The European Society of Gastrointestinal Endoscopy (ESGE) guidelines on removal of foreign bodies in the upper gastrointestinal tract in adults recommend plain X-ray in case of ingestion of radiopaque objects is suspected or the type of object is unknown, and a CT scan in case of suspected perforation or other complications that may require surgery.⁶ As CT scan is expensive most of doctors perform rigid esophagoscopy based on X-rays findings and clinical findings in a developing country. In our case we operated based on our clinical findings and X-ray of the soft tissue neck.

CONCLUSION

What we can conclude from our case is that, it is always better to confirm a diagnosis of suspected foreign oesophagus with a CT-scan or upper GI endoscopy if available to avoid an unnecessary intervention and suffering of patients.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

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Cite this article as: Shrestha S, Maharjan S, Dhungana A. Cricoid cartilage ossification confuse as an oesophageal foreign body. *Int J Sci Rep* 2022;8(8):246-8.