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Arteria lusoria: A very rare cause of esophageal obstruction in a hypoxemic patient

To the Editor,

Foreign body ingestion is a commonly encountered problem among emergency department physicians and gastroenterologists. The esophagus, as the narrowest part of the gastrointestinal tract other than the appendix, is a common site of foreign body impaction (1). Rarely, external esophageal factors, such as arteria lusoria, may be a factor in food bolus impaction.

A male patient aged 50 years presented to the emergency department with a complaint of dysphagia after ingestion of a whole plum without chewing. His history revealed a diagnosis of schizophrenia 15 years ago. This was the patient's second presentation to a hospital with this complaint. At the first hospital, his relatives and the physicians did not believe the patient due to his schizophrenia after a posteroanterior x-ray examination was reported as normal. The physical examination was unremarkable, except for hypoxemia with a saturation of 75%-80%. The thoracic computed tomography (CT) revealed an esophageal foreign body compatible with a silhouetted plum image at a distance of <7 cm after the epiglottis and a concomitant right subclavian artery originating as the last branch of the aortic arch (Figure 1). The CT revealed an obstruction caused by the plum, which was lodged in the esophagus just superior to where the artery followed a retroesophageal course to cross the midline (Figure 2). There was no tracheal compression or any finding that explained the hypoxemia in the CT examination. The patient underwent a flexible endoscopic approach, and the foreign body (plum) was removed by breaking it into pieces and pushing it through the esophagus to the stomach. The oxygen saturation increased to within normal range, 95%-97%, after endoscopic administration. The patient was discharged home after a 6-hour observation period, with relief of his complaints.

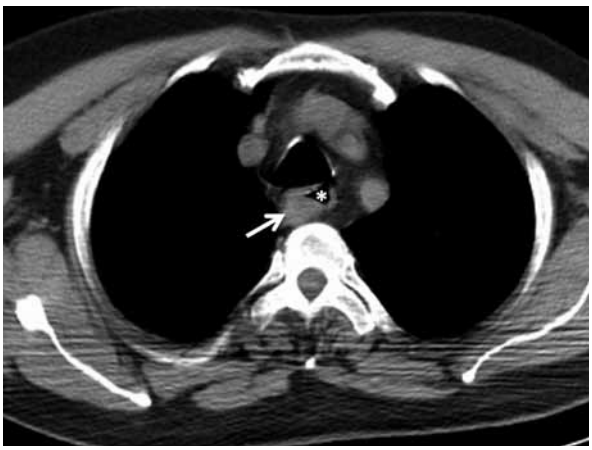

Figure 1. Arrow: aberrant right subclavian artery following a retroesophageal course. Asterisk: esophagus.

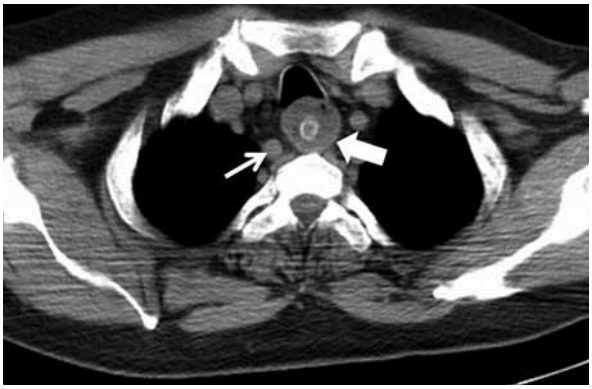

Figure 2. Arrow: aberrant right subclavian artery. Thick arrow: image of lodged fleshy plum.

A search of the literature revealed no data about whole plum impaction in the esophagus with concomitant arteria lusoria; thus, this case is unique. The most common embryological abnormality of the aortic arch is an aberrant right subclavian artery, which occurs in 0.5% to 1.8% of the population, and it is commonly referred to as 'dysphagia lusoria' and was first reported in 1794 by Bayford (2,3).

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To our knowledge, there has also been no report in the literature about mild hypoxemia caused by food impaction in the esophagus, as seen in this case. Because of the patient's psychiatric disorder, the discomfort caused by the impacted food may have resulted in the hypoxemia, but the physical examination at presentation revealed no inhalation problems, and the thoracic CT showed no external compression of the airway tract.

In some cases, asymptomatic arteria lusoria is discovered incidentally during investigations for other complaints or in the clinic during the work-up for clinical states, such as dysphagia. In our case, the previously asymptomatic arteria lusoria became symptomatic after the patient ingested an object inherently difficult to swallow.

Early removal of food that is impacted in the esophagus is recommended (4). We preferred immediate endoscopic intervention as a therapeutic approach in this case to remove the impacted food as soon as possible. After its removal, no erosion or pathological lesions in the esophagus or any sign of external compression caused by arteria lusoria was seen by endoscopic examination.

This case reminds us that caution should be taken when examining patients with psychological disorders, and their history should be investigated carefully.

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Informed Consent: Informed consent was obtained from patients who participated in this case.

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