

CT Imaging of Arteria Lusoria: Anomalous Right Subclavian Artery with Retroesophageal Course

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Arteria lusoria, also known as the aberrant right subclavian artery, is a rare congenital anomaly but is the most common aortic arch variation, occurring in 0.2% to 3% of the population with a higher prevalence in females [1]. In this condition, the right subclavian artery arises from the left side as the last branch of the aortic arch, beyond the left subclavian artery, instead of originating from the brachiocephalic trunk [4]. It then reaches its normal position in the arm by following a retroesophageal route (**Figure**).

The abnormal embryologic course is leading to the regression of the right fourth vascular arch and proximal right dorsal aorta, while the seventh intersegmental artery persists in the proximal portion of the descending thoracic aorta [1,2].

This aberrant artery is asymptomatic in most cases (90–93%), but it can lead to symptoms such as dysphagia, cough, dyspnea, and retrosternal pain as a result of compression on surrounding structures [1]. Its discovery often occurs incidentally during imaging studies such as CT scans or magnetic resonance imaging. However, it is crucial to be aware of this variant prior to any cervical or thoracic surgery to guide the surgical approach and prevent complications [1]. This anatomical variant can be associated with other vascular malformations as tetralogy of Fallot, and may be present in Turner, Edwards, Down's, Di George, Patau, Potter, Noonan and post-rubella syndromes [3]. CT angiograms, known for their high spatial resolution, are especially useful in detecting the anomalous branching patterns and vascular abnormalities associated with ARSA [3].

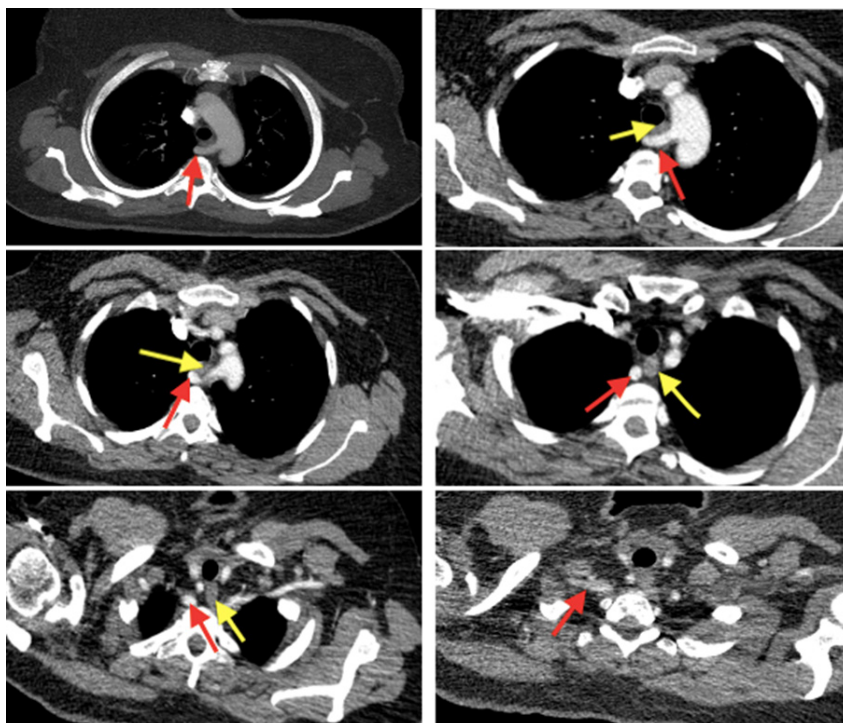


Figure: CT scan images of an aberrant right subclavian artery (arteria lusoria) are shown, with the red arrow indicating its origin from the left side as the final branch of the aortic arch. The artery follows a retroesophageal route (yellow arrow: esophagus) to reach its normal position in the arm.

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