

# Rare But Dangerous Anomaly of the Right Pulmonary Vein in Subcarinal Dissection

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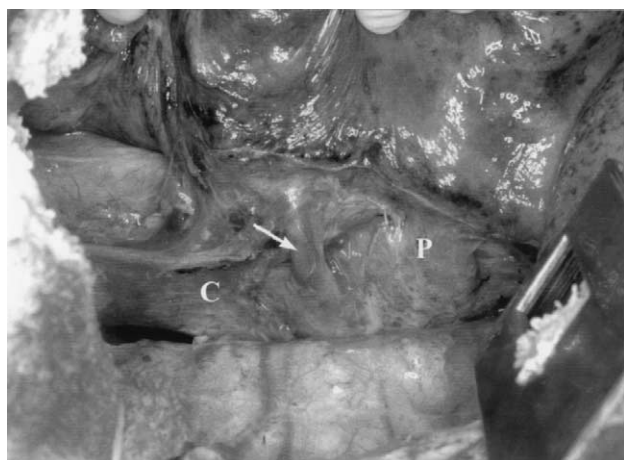


Fig 1.

Lymph nodes located in the space below the bifurcation of the trachea (subcarinal nodes) are occasionally involved in esophageal and pulmonary malignancies. Subcarinal dissection is a common surgical procedure.

A 57-year-old man with abnormal anatomic configuration in the subcarinal area underwent esophagectomy with systematic nodal dissection for esophageal cancer. Normally, the origin of the superior pulmonary vein is located anterior to the right bronchus. In this patient, one of the superior right pulmonary veins (Fig 1, arrow [C = posterior wall of carina; P = inferior pulmonary vein]) originated in the subcarinal area, and crossed just behind the intermediate bronchus. The subcarinal portion of the vein was embedded in the subcarinal lymph nodes. This

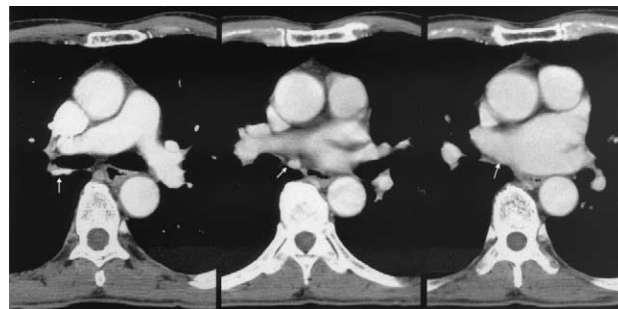


Fig 2.

anomalous vein was clearly demonstrated preoperatively on computed tomography (Fig 2, arrows). Of 700 esophagectomy cases, this case was only the second with this abnormality.

Normally, no large vessels are located in the subcarinal space, and the superior and anterior borders of this compartment are clearly defined by the main bronchi and pericardium, respectively. Therefore, surgeons pay little attention to fragile anatomic structures, except for the bronchial arteries, during routine subcarinal dissection. Possible damage of this anomalous vessel during dissection might result in serious bleeding. If the vessel is injured during an operation performed through left thoracotomy, hemostasis through a narrow operative field would be difficult because of massive blood flow from the left atrium and lung. Although this type of anomaly is rarely found, surgeons should be aware of the possibility, and carefully look for it on the preoperative computed tomography scans.

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