Double Inferior Venacava with Anomalous Hemiazygos Vein – A Case Report

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Abstract

Objective: Duplication of the inferior vena cava (IVC) is a rare variation that is caused by an alteration in the embryogenesis of the cardinal venous system. It is found in 0.3 to 3% of the population. There are various types of double IVC and this case is reported since it is unique among them.

Materials and methods: During dissection of an eighty seven year old female cadaver, presence of an IVC was noted on either side of the abdominal aorta. The course and the termination of both the IVCs were dissected. The azygos and the hemiazygos veins were traced into the thoracic cavity up to their termination.

Results: In the posterior abdominal wall, the right IVC was found to be the continuation of the right common iliac vein and its course and termination was normal. On the left, the common iliac vein continued as the left IVC. Both the IVCs were connected by a venous bridge which coursed deep to the abdominal aorta. The left IVC passed through the medial arcuate ligament and entered the thoracic cavity as the hemiazygos vein. It was the only hemiazygos vein and drained into the azygos vein which was smaller than the hemiazygos vein.

Conclusion: The most common type of the double IVC is the termination of the left IVC in the left renal vein which drains into the right IVC. This case had a normal termination of the right IVC and continuation of the left IVC as the hemiazygos vein, which is a rarely reported variant. Double IVC is usually asymptomatic but if unnoticed, may lead to severe hemorrhage in the retroperitoneal surgeries. In the imaging studies, a thrombosed left IVC might mimic retroperitoneal lymphadenopathy. Adequate knowledge of this variant aids in the proper interpretation of radiological images and avoids intraoperative complications.