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Olgu sunumu

İnferior Vena Cava Duplikasyonu: Nadir Bir Vaka

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Ö Z

İnferior vena cava duplikasyonu (IVC) nadir bir anormalliktir. Özellikle vasküler cerrah ve radyologların günlük uygulamasında ayrıca retroperitoneal cerrahi ve tromboembolik hastalığın tedavisi için önemlidir. Bu çalışma, IVC için acil hekimleri bilinçlendirmeyi ve yanlış tanıyı önlemeyi amaçlamaktadır.

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Case report

Duplication of The Inferior Vena Cava: A Rare Case

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ABSTRACT

Double inferior vena cava (IVC) is rare abnormality. It is important for vascular surgeons and radiologists and especially for daily practice during the treatment of retroperitoneal surgery and thromboembolic disease. This study aims to raise awareness for emergency physicians for the IVC and to avoid misdiagnosis.

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Introductıon

Double inferior vena cava (IVC), an embryonic origin stage, is a rare congenital vascular anomaly and rarely seen by physicians. The reported incidence is relatively rare, ranging from 0.2% to 3% (1). Most cases are asymptomatic and it is usually diagnosed incidentally for research other diseases. These venous anomalies can be significant for the difficulties encountered during retroperitoneal surgery and venous interventional radiological procedures (2,3). This study aims to raise awareness for emergency physicians for the IVC and to avoid misdiagnosis.

Case Report

A 36-year-old male patient presented to the emergency department with complaints of severe debilitating abdominal pain that had begun 4 days prior. His abdominal pain was colicky and spread out in front of the abdominal wall and spreading on his back and the pain was exacerbated by motion, but it can be decrease at rest. His past medical history was unremarkable. The vital signs of the patient at admission are all within normal ranges. Laboratory test results were normal limits but mild leucocytosis of 12.000 / µL, microhematuria and pyuria was detected. On abdominal ultrasonography, two tubular structures representing venous abnormalities

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were recorded by localized to the right side of the abdominal aorta. An abdominal computed tomography (CT) scan showed incidental finding of incidental finding of IVC with similar dimensions on both sides (Figure 1-2).

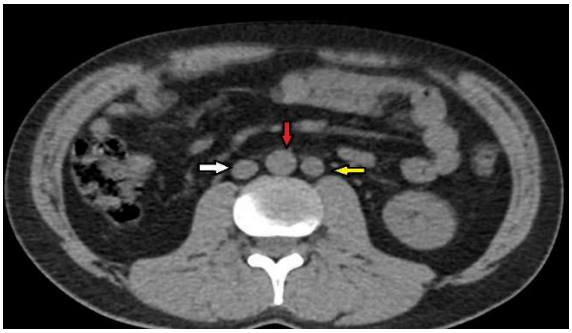

Figure 1: Abdominal CT axial images that presented double IVC (white arrow: right VCI, yellow arrow: left VCI, red arrow: abdominal aorta).

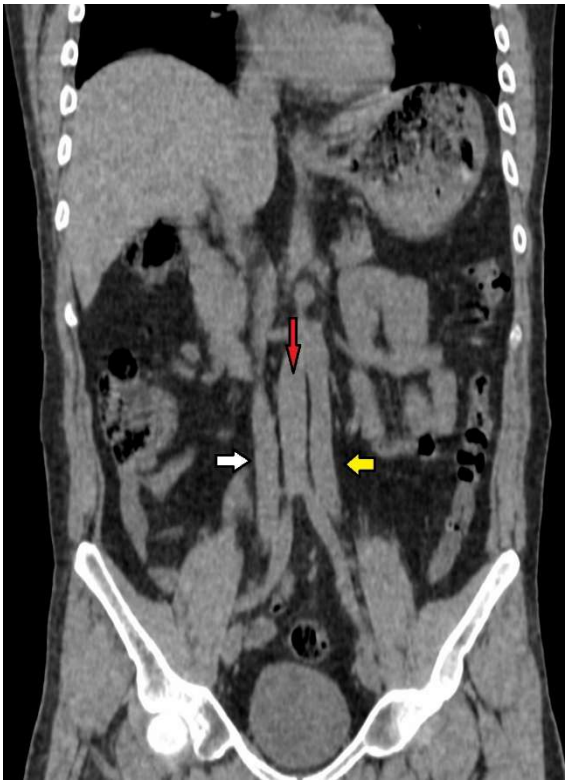

Figure 2: Abdominal CT coronal images that presented double IVC (white arrow: right VCI, yellow arrow: left VCI, red arrow: abdominal aorta).

Patient was then referred to surgery department for further management for IVC. The patient's consent was taken from the patient who participated our study.

Dıscussıon

The embryogenesis of the IVC occurs by sequential and regular development and regression of three paired veins. This procedure starts at the 6th week of pregnancy and is completed in 10th weeks. In the embryogenesis, posterior cardinal veins are first formed and then the anterior cardinal veins follow. After that subcardinal veins (SCV) then appear anteriorly and medially in the posterior SCV (3,4).

The left SCV completely retracts when the right SCV forms the suprarenal IVC. Then, the supra cardinal veins (spCV) appear dorsally in the SCV. The left spCV then regresses and forms the right spCV infrarenal (4,5).
The variations of the IVC anatomy are divided into 15 types, but some of them are occurred only in animals. In a study reported by Bass, major anomalies were double IVC with a prevalence of 1 to 3%. Others are the left IVC, the retroaortic left renal vein, left IVC, the absence of the hepatic segment of IVC and their prevalence ranges from 0.2 to 9% of cases (4).

The duplication of IVC is caused for the persistence of right and left SCV. IVC diagnosis is clinically important for the prevention of recurrent pulmonary embolism, after IVC filtration, retroperitoneal surgery or vascular interventional procedures (6,7). Most of the cases of bilateral IVC are incidentally diagnosed while investigating other diseases, although this disease is generally asymptomatic and may be of particular anatomical importance for surgeons. As imaging, the presence of a double IVC may be a pathological lesion such as lymphadenopathy or pyelo ureteral dilatation (8). These venous anomalies are especially important in advanced treatment centers. Because it may have significant clinical effects such as retroperitoneal surgery, thromboembolic diseases and organ transplantation.

As a result, double IVC an embryonic origin stage, is a rare congenital vascular anomaly, rarely seen by physicians. Most of the cases the diagnosis is made randomly for researching other diseases. However, they can have significant clinical effects in the treatment of retroperitoneal surgery or thromboembolic diseases.

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