A rare case of interrupted inferior vena cava with azygos continuation

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Abstract
The identification of vascular pathologies of the mediastinum is very important for the prevention of complications during the interventional procedure. A rare developmental anomaly of inferior vena cava (IVC): the interrupted IVC continues with azygos vein in thorax. And then, the azygos vein merges with the superior vena cava (SVC) and pours into the right atrium. The incidence is reported to be 0.6%. It is a crucial application to distinguish the enlarged azygos vein from the right paratracheal mass and lymph node radiologically and clinically.

Keywords
Vena Cava Inferior; Azygos; Variation
Interrupted inferior vena cava

Introduction
The IVC is a single vessel that is located in the right side of abdominal aorta. If disorder occurs during embryogenesis, it can cause congenital anomalies of the IVC. Vascular anomalies of IVC are not common and are often recognized incidentally during radiological and surgical procedures. The incidence is reported to be 0.6% [1]. In the absence of cardiac abnormalities, the incidence of the variations or anomalies of IVC has been reported to be 0.3% in the normal population [2]. We hereby present an asymptomatic case of IVC with azygos continuation without cardiac comorbidity.

Case Report
A 29-year-old male patient was admitted to our outpatient clinic with chest pain. The was completely healthy with no chronic disease history. The physical examination was normal. Chest x-ray showed mediastinal widening with enlargement of azygos arch and right hilus (Figure 1). On contrast-enhanced computed tomography (CT) images, a right sided azygos vein and an enlarged IVC with no hepatic segment was observed. The hepatic veins were pouring into right atrium. Additionally, the azygos vein was prominently dilated. There was no obvious abnormality in the hemiazygos vein (Figure2-3-4). Informed consent form was received from the patient.

Discussion
The IVC is one of the largest vein in the body. It is responsible for the venous drainage of the abdomen. It ascends through the abdominal and then the thoracic cavity and finally drains into the right atrium. Embryogenesis of IVC comprises complex relations with other abdominal and thoracic structures. These unknown conditions lead to the development of IVC anomalies. The anatomical variations are usually discovered incidentally as clinically silent. But in some cases collateral vessels provide physiological compensation for venous circulation and they present with deep venous thrombosis, atypical lower back pain, recurrent venous thromboembolism and hematoma [2]. IVC formation during embryogenesis occurs at 4-8 weeks of gestation. IVC is the result of several anastomoses made by three group of embryological veins: the supracardinal, the posterior and the
Interrupted inferior vena cava

**Scientific Responsibility Statement**

The authors declare that they are responsible for the article’s scientific content including study design, data collection, analysis and interpretation, writing, some of the main line, or all of the preparation and scientific review of the contents and approval of the final version of the article.

**Animal and human rights statement**

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. No animal or human studies were carried out by the authors for this article.

**Conflict of interest**

None of the authors received any type of financial support that could be considered potential conflict of interest regarding the manuscript or its submission.

**References**


How to cite this article: