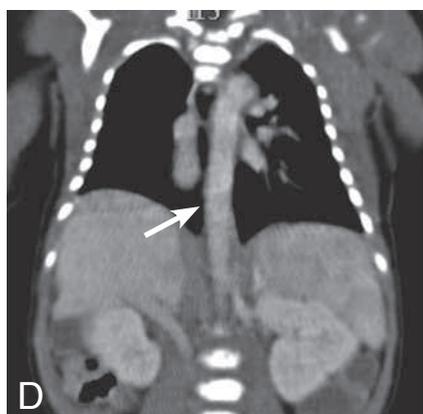
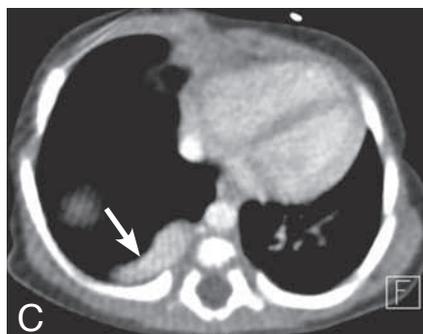
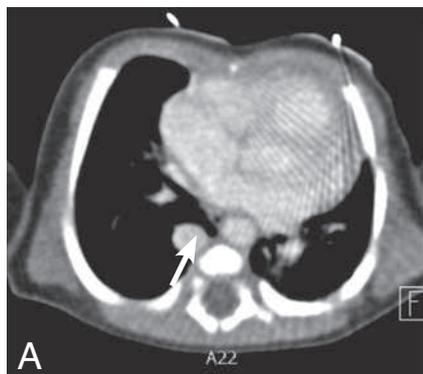


IMAGES IN CLINICAL RADIOLOGY



Congenital azygos pseudocontinuity with right lower intercostal vein

M.A. Houbart, Th. Couvreur, L. Gérard, A. Georgiopoulos, B. Desprechins¹

We report the case of a neonate born at 38^{wk} weeks of gestation with median birth weight and size and in the 75th percentile for head circumference. Routine pregnancy follow up allowed the antenatal discovery of azygos continuation with absence of the inferior vena cava.

Within the framework of a polymalformative assessment a low dose thoraco-abdominal angioscanner showed a complete absence of the supra-renal and retrohepatic segments of the inferior vena cava (Fig. D, white arrow) while a substitute collateral circulation was provided by a dilated right intercostal vein (Fig. C), white arrow which appeared to be in continuity with the supradiaphragmatic azygos vein. The arch of the azygos vein was also dilated (Fig. A, B, white arrow).

Comment

Absence of the retrohepatic segment of the inferior vena cava with azygos continuation is a rare congenital anomaly with a current prevalence of 0,6% (1).

In order of frequency, it represents the second most common systemic venous return anomaly, after persistent left superior vena cava (1).

Once frequently associated with severe congenital heart diseases, as well as polysplenia and asplenia, it is nowadays, since the advent of cross-sectional imaging, incidentally diagnosed in asymptomatic patients (1).

Azygos continuation and absence of the inferior vena cava can be diagnosed using classic imaging techniques such as radiography, ultrasound, CT-scanner and MRI.

The aforementioned techniques will reveal absence of the retro-hepatic segment of the inferior vena cava and drainage of the hepatic veins into a short inferior vena cava segment, or directly into the right atrium.

They will also demonstrate a blind-ended inferior vena cava at its cranial margin at level of renal pedicle, as well as an azygos vein of practically equal calibre to that of the aorta, in the classic forms.

In our case, only the supradiaphragmatic segment of the azygos vein and its arch appear dilated, and communicate with a dilated right intercostal vein, which in turn communicates with the right renal vein.

Also, we notice a hypoplastic infradiaphragmatic azygos vein associated with an increased (left) hemiazygos vein calibre.

Congenital vascular anatomical variations, and in particular, inferior vena cava and azygos venous system congenital variations with azygos continuation are important to recognize and describe in order to avoid any diagnostic errors in the supradiaphragmatic and mediastinum region.

Preoperative assessment of the cardiovascular surgical patient requires an adequate knowledge of vascular anatomical variations and malformations.

The prognosis of azygos continuation depends on associated cardiac anomalies.

Reference

1. Edward Bass A., Redwine M., Kramer L., Huynh P., Harris J.: Spectrum of Congenital Anomalies of the Inferior Vena Cava: Cross-sectional Imaging Findings. *Radiographics*, 2000, 20: 639-652.

¹. Dpt of Pediatrics Imaging, University of Liège, Liège, Belgium.