

Variant hepatic portal vein and incomplete celiac trunk: the anatomical context

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Dear Editor,

We read the interesting case report published in the Romanian Journal of Morphology and Embryology entitled “Anatomical variations of the hepatic portal vein associated with incomplete celiac trunk” by Dorina Sztika *et al.* [1]. This case report described the variation of the hepatic portal vein associated with incomplete celiac trunk. We take this opportunity to share some important scientific facts on the topic. We agree with the authors that the anatomical vascular variations are important in abdominal surgery and radiological procedures.

In the described case, the presence of any associated anomaly of the other organs was not reported. This means that the reason for the venous anomaly was solely linked to the developmental defect of the venous system. It may be mentioned that during 4th–5th gestational weeks, there is formation of portal vein from the anastomosing network between the vitelline veins [2]. Hence, the defect may have occurred during 4th–5th gestational weeks.

According to the earlier researchers, any variations with regard to the topographical anatomy of the hepatic vessels may lead to the variable ischemia to the liver and gallbladder [3]. Furthermore, in the described case, the diameter of the hepatosplenic trunk was smaller compared to the normal celiac trunk. The authors also mentioned the oblique angle (148⁰) formed by the portal vein and the vertical plane. Perhaps, this may lead to the alteration in the hemodynamics of the blood vessel. Ultrasound examination prior to any surgery may be beneficial because any underlying blood vessel anomaly may be detected.

According to researchers, the longitudinal anastomosis between the four roots of the splanchnic arteries and the celiac artery and its branches develop from the first root [3]. The central two roots disappear leaving aside the first and fourth roots, which are connected through the ventral longitudinal anastomosis [3]. Another school of thought is that the second root forms the common hepatic artery and the third root forms the splenic artery [4]. In this case, we speculate that there may not have been any anastomosis between the first and second roots, so that the left gastric artery is formed alone. However, the second and third still maintained the anastomosis and formed the hepatosplenic trunk. The developmental defect of the vascular wall may also give rise to aneurysms. The anomalies pertaining to the celiac arteries and its branches may also cause problems during pancreatic surgery. Overall, an interesting article for which the authors and editor need to be applauded.

References

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