

Abstract

The Anatomical and Surgical Peculiarities of the Hepatic Venous System

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Abstract: Objective of the study: To investigate the anatomical and surgical peculiarities of hepatic veins. Currently, complex liver pathology has imposed an increased need for surgical interventions at this level, which has required a detailed knowledge of hepatic blood circulation. An important place in this study belongs to the efferent venous circulation. Under normal conditions, the liver accumulates about 20% of the circulating blood volume and directs up to 1,200 ml of blood per minute into the inferior vena cava, which represents 50% of the breast volume returned through this vein. The advances made lately in knowing the anatomical distribution of the components of the hepatic, arterial and venous vascular tree have allowed a systematization of knowledge in the field of liver segmentation. **Material and Methods:** To establish the morphology of hepatic veins, the study was performed on a number of 11 macroscopic liver preparations. Macropreparations were taken from cadavers of both sexes who died at different ages, in which no diseases of the hilar or cavale area of the liver. As working methods, we used: plastic injection, which has solvent dust and green, yellow, blue and red paint, and corrosion step in hydrochloric acid solution. **Results:** The trunks of the hepatic veins in all given cases are located intraorganically and flow into the inferior vena cava in its subdiaphragmatic portion. Depending on the size of the veins, large hepatic veins with a diameter of 7-18 mm and small diameters of 2-6 mm can be highlighted. The number of hepatic veins flowing into the inferior vena cava is variable. Depending on their distribution in the liver lobes, the veins can be divided into three groups: right, middle and left. However, in all cases there are three main veins: upper right, main left and middle. More than three veins were determined on the studied preparations, their number reaching from 3 minimum to 10 maximum, including the main hepatic veins, but without the veins that collect the blood from the classical segment I, because the last one is an independent territory in any segmentation. 8 cases (72.7% of cases) with supernumerary (multiple) hepatic veins were obtained. **Conclusions:** The casts of the venous elements of the liver, obtained by polychrome injection and corrosion are very informative. The injection method with subsequent corrosion allowed us to elucidate some quite important topographical details, details that cannot be highlighted by applying other study methods. This technique allowed us to obtain some preparations, which provide real parameters of both the dimensions of the liver and the morphometric indices of the hepatic veins trained in the given study.

Keywords: liver; hepatic veins; plastic injection; corrosion.