

Conventional and variant termination of the portal vein in a black Kenyan population

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Abstract:

BACKGROUND: Knowledge of the variant terminations of the portal vein is important in surgical and interventional radiological procedures of the liver. Their pattern and frequency are important in planning surgery to minimize complications. They differ between populations, but data from Africa is unavailable. **AIM:** To investigate the variant termination of the main portal vein. **MATERIALS AND METHODS:** One hundred livers from adult black Kenyans (age range 35 - 79 years) were studied at the Department of Human Anatomy, University of Nairobi, Kenya, by gross dissection. The livers were cleared of blood, fixed with 10% formaldehyde solution and the venous system infused with Acrylate monomers to keep the veins firm. The level of termination relative to the capsule and the branching pattern of the portal vein were examined. Various patterns were photographed using a digital camera. Data was analyzed using SPSS version 16.0 for windows and presented in tables and macrographs. **RESULTS:** Main portal vein termination was extracapsular in 14%, capsular in 40% and intrahepatic in 46%. Variant termination occurred in 49% of cases while conventional bifurcation occurred in 51% cases. Types, 2, 3 and 4 pattern of termination of main portal vein occurred in 15%, 22% and 12% cases respectively. The level of termination of the MPV had a positive correlation with its pattern ($p=0.05$). **CONCLUSIONS:** The high prevalence of variant termination of MPV in the current study suggests that the population is more vulnerable to inadvertent injury during surgery and radiological intervention. Besides, an extra hepatic termination of the MPV is more likely to have a conventional branching pattern compared to an intra-hepatic termination.