

Variations in the Right Posterior Hepatic Duct Insertion and Differences Between Genders

M.J.S. Jayarathna^{1*}, J. Udupihille², B. Dassanayake³, H.A. Amaratunga¹

¹*Department of Anatomy, ²Department of Radiology,*
³*Department of Surgery, Faculty of Medicine, University of Peradeniya, 20400,*
Sri Lanka

**jayamini.jayarathna@med.pdn.ac.lk*

The biliary tract consists of a duct system draining the liver. Their pattern shows several variations. Knowledge regarding these variations is important in treating disorders of biliary tract. Endoscopic retrograde cholangiopancreatography (ERCP) and cholangiography are widely used radiological techniques to assess biliary tract. ERCP is used for therapeutic interventions as well. The objective of this study was to describe the variations in insertion of right posterior hepatic duct (RPHD) based on Huang classification using ERCP and cholangiogram images and to report the variations with gender. This retrospective descriptive study was conducted at Faculty of Medicine, University of Peradeniya and Teaching Hospital, Peradeniya. 74 ERCP images (n = 49) and cholangiogram studies (n = 25) conducted for diagnostic purposes from January 2021 to July 2023 were retrieved, and 13 were excluded due to incompleteness, low image quality, structure overlays and blurs. 61 images were reviewed by a radiologist and an anatomist to identify variations. Population age range was 23 – 81 years with 65.6% being females (n = 39). Variations and Huang types observed in the population were insertion of RPHD to right anterior hepatic duct (Type A1) - 42, to hepatic confluence/ trifurcation (Type A2) - 15, to left hepatic duct (Type A3) - 3, to common hepatic duct (Type A4) - 1. Insertion into cystic duct (Type A5) was not observed. No significant difference observed in variations of RPHD insertion with gender (p = 0.684). Our study population shows Huang A1 as the dominant pattern followed by Huang A2. Uncommon Types A3 and A4 variants were also observed but not Type A5. Pattern observed in our sample is similar to data from East Asia and not South Asia. A thorough knowledge on the pattern in Sri Lanka will aid clinicians to diagnose and treat biliary tract diseases more accurately.

Keywords: Biliary tract variations, Cholangiography, Endoscopic retrograde cholangiopancreatography