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Title: Doppler study of Hepatic artery, basket and feeding vessels in liver malignant tumors.

Introduction: Neovascularization develops around the HCC and malignant tumors of liver in basket form. This leads to increased blood supply via hepatic artery. We have tried to do quantification of hepatic artery, basket vessels and feeding vessels where ever it is found. We have accumulated data of liver tumors (malignant) from 2013 to sep.2017 from our color Doppler Centre. Our center is located in Punjab province of Pakistan. Here prevalence of hepatitis C in 6.5% which is very high

[1]. China has the highest burden of HCV infection cases. Pakistan has the second highest burden of HCV positive cases

[2] This is a retrospective study.

Objective: The purpose of this study was to establish the peak systolic velocity of hepatic artery of hepatic malignant lesion which is found hepatitis c and hepatitis B related complication Materials an method.

Study comprises of 82 patients with almost equal females & males of age 40 to 70 years .It began in April 2013 and still continues. Verbal consent was taken to include in this study. I have studied liver cancers an especially HCC and I am of the opinion that PSV 80 cms/sec should be a cut off value between benign and malignant tumors. Can we set it a gold standard?

Subjects & Methods: Study comprises of 82 patients with almost equal females & males of age 40 to 70 years .It began in April 2013 and still continues, in our outdoor during their USG consultation, with convex probe. The multi frequency transducer 2.5 to 6.0 MHz was used. Hepatic artery was interrogated (seldom) at the head of pancreas with angle correction or in liver along with portal vein without angle correction (as at this naturally angle is corrected) in fasting state to keep the measurements uniform as food intake profoundly increases the PSV. Basket or circumferential vessels and feeding vessels were also studied.

Results: The normal PSV in normal subjects is 25 to 40 cm/sec. It goes up to 60 cm/sec in cirrhotic, if it goes beyond that, portal vein tumor or HCC will be suspected. We can take PSV of 80 cms/sec a cut off between benign and malignant tumors.