

a phenomenon. In two cases, an admixture of pathologic changes of hydronephrosis and multicystic kidney were seen supporting a previously established concept that multicystic kidney represents a stage in the progression of complete obstruction of the ureter in utero. Representative sonograms and radiographs are provided.

Intravenous Echoes Due to Laminar Flow: Experimental Observations. D. O. Cosgrove, P. H. Arger; Hospital of the Univ. of Pennsylvania, Philadelphia, PA and Royal Marsden Hospital, Sutton, Surrey, United Kingdom. *Am J Roentgenol* 139:953-956, 1982

In vitro studies were carried out to determine the source of echoes observed within larger veins in the abdomen. Injection of various fluids (water, degassed water, 5% dextrose, and whole blood) into a water bath was observed with a high-resolution, real-time imaging device. Strong echoes were seen with the injection of 5% dextrose or blood whereas no echoes were produced by the injection of degassed water. Admixture of flowing solutions of different compositions accomplished by a sidearm connected into a polyethylene tube immersed in a water bath demonstrated the production of echoes that travel downstream and disappear within several seconds following the mixture of dissimilar fluids (e.g., normal saline or 5% dextrose injected into the sidearm to mix with water in the main tube). Such echoes were produced equally by very slow or very rapid injections, and the inference is made that the echoes are produced by an interface between two acoustically dissimilar fluids a short time before total admixture occurs. This postulate is made to account for a similar phenomenon at the junction of renal or hepatic veins with the inferior vena cava secondary to the addition or deletion of various components of blood by the contributing organs. Gas bubbles in high turbulence situations and additional echoes from particles in cellular fluids have

also been shown to produce echogenicity within liquids. Representative sonograms are provided.

Ultrasonographic Features of Hepatic Adenomas in Type 1 Glycogen Storage Disease. R. A. Bowerman, B. I. Samuels, T. M. Silver; Univ. Michigan Med. Ctr., Ann Arbor, MI. *J Ultrasound Med* 2: 51-54, 1983

The authors present three cases of hepatic adenoma occurring in a liver affected by type I glycogen storage disease (von Gierke's disease). The adenoma was markedly echogenic and showed surprising enhancement of through transmission, with refractile shadowing frequently seen at the edges of the lesion. The larger adenomas often had hypochoic areas intermixed with the hyperechogenicity, presumably reflecting hemorrhage or necrosis within the adenoma. The adenomas were single or multiple and tended to occur in older patients (ranging from 20-22 yr in age). A hypochoic rim about the lesion was an inconstant finding thought to represent either a thin capsule or compressed adjacent liver parenchyma.

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BOOKS RECEIVED

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