The “Christmas Tree” Sign on MR Cholangiogram in Left-Sided Cholangiohepatitis

Mohammad Ibrarullah¹ · Sadananda Meher¹ · Wani Hamza Bruno¹ · M. S. Modi¹

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Abstract

We report the “Christmas tree” sign on the magnetic resonance cholangiogram in two patients with left-sided cholangiohepatitis.

Keywords Cholangiohepatitis · Recurrent pyogenic cholangitis · Oriental cholangiohepatitis · Magnetic resonance cholangiogram · Inflammatory stricture

Two patients, 47-year-old male and 60-year-old female, respectively, presented with intermittent abdominal pain and fever with rigor and chills. The liver function tests in both the patients reported moderate elevation of serum alkaline phosphatase. Abdominal ultrasonogram revealed dilated intrahepatic biliary radicles involving left lobe of the liver with echogenic calculi inside. The second patient, in addition, had cholelithiasis. The rest of the biliary system was normal. Magnetic resonance (MR) cholangiogram in both revealed (Figs. 1 and 2) focal stricture involving left hepatic duct. The ducts proximal to the stricture were dilated. Being filled with stones and sludge, the peripheral ducts appeared pruned. With these findings, the cholangiogram on the left side typically looked like a “Christmas tree.” Both the patients underwent left hepatectomy. The histopathology of the resected specimen confirmed benign inflammatory pathology consistent with cholangiohepatitis.

In India, cholangiohepatitis is an uncommon clinical entity with only a few published reports [1–3] till date. Left hepatic ductal system is involved in nearly half of the patients [1]. The

Fig. 1 Magnetic resonance (MR) cholangiogram showing focal stricture of the left hepatic duct (arrow) and dilatation of the ductal system proximal to the stricture. Paucity of the ducts from the center to periphery of the left lobe and pruning of the side branches imparting a “Christmas tree” appearance

cholangiographic sign described by us can help in the diagnosis of this entity.

✉ Mohammad Ibrarullah
ibrarullahm60@gmail.com

¹ Department of Surgical Gastroenterology, Apollo Hospitals, Bhubaneswar 751012, India

Fig. 2 Magnetic resonance (MR) cholangiogram showing focal stricture of the left hepatic duct (arrow) and dilatation of the ductal system proximal to the stricture. Paucity of the ducts from the center to periphery of the left lobe and pruning of the side branches imparting a “Christmas tree” appearance

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

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