

Role of Magnetic Resonance Cholangiopancreatography in diagnosing Choledochal cysts: Case series and review

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Aim: To determine the merits of magnetic resonance cholangiopancreatography (MRCP) as the primary diagnostic test for choledochal cysts (CC's).

Methods: Between 2009-2012, patients who underwent MRCP for perioperative diagnosis were identified. Demographic information, clinical characteristics, and radiographic findings were recorded. MRCP results were compared with intraoperative findings. A PubMed search identified studies published between 1996-2012, employing MRCP as the primary preoperative imaging and comparing results with either endoscopic retrograde cholangiopancreatography (ERCP) or operative findings. Detection rates for CC's and abnormal pancreaticobiliary junction (APBJ) were calculated. In addition detection rates for clinically related biliary pathology like choledocholithiasis and cholangiocarcinomas in patients diagnosed with CC's were also evaluated.

Results: Eight patients were identified with CC's. Six patients out of them had type IV CC's, 1 had type I and 1 had a new variant of choledochal cyst with confluent dilatation of the CBD and cystic duct. Seven patients had an abnormal pancreaticobiliary junction (APBJ) and 3 of those had a long common-channel. Gallstones were found in 2 patients, 1 had a common bile duct (CBD) stone, and 1 pancreatic-duct stone was also detected. In all cases, MRCP successfully identified the type of CC's, as well as APBJ with ductal stones. From analyzing the literature, we found that MRCP has 96-100% detection rate for CC's. Additionally, we found that the range for sensitivity, specificity, and diagnostic accuracy was 53-100%, 90-100% and 56-100% in diagnosing APBJ. MRCP's detection rate was 100% for choledocholithiasis and 87% for cholangiocarcinomas with concurrent CC's.

Conclusion: After initial ultrasound and CT scan, MRCP should be the next diagnostic test in both adult and pediatric patients. ERCP should be reserved for patients where therapeutic intervention is needed.

Biography

Danny Sleeman, MD has completed his MD degree at McGill University. He has become a worldwide leader in hepatobiliary surgery and has evolved his techniques and efforts to reduce morbidity and mortality in patients undergoing major hepatobiliary operations. Currently, he is Professor of Surgery, Chief of Division of Surgical Critical Care, and Director of General Surgery Residency Program at Jackson Memorial Hospital, University of Miami Miller School of Medicine, Miami, Florida.