

표 1 . 복부 핵심질문 1 근거표

문헌정보	연구유형	대상자 수	문헌 질 KCIG
Thornton JR1, Lobo AJ, Lintott DJ, Axon AT. Value of ultrasound and liver function tests in determining the need for endoscopic retrograde cholangiopancreatography in unexplained abdominal pain. Gut. 1992 Nov;33(11):1559-61.	Observational (후향적)	138	2
Soto JA1, Alvarez O, Múnera F, Velez SM, Valencia J, Ramírez N., Diagnosing bile duct stones: comparison of an enhanced helical CT, oral contrast-enhanced CT cholangiography, and MR cholangiography., AJR Am J Roentgenol. 2000 Oct;175(4):1127-34.	Observational (후향적)	51	2
Varghese JC1, Liddell RP, Farrell MA, Murray FE, Osborne DH, Lee MJ., Diagnostic accuracy of magnetic resonance cholangiopancreatography and ultrasound compared with direct cholangiography in the detection of choledocholithiasis.Clin Radiol. 2000 Jan;55(1):25-35.	Observational (후향적)	191	2
Varghese JC, Farrell MA, Courtney G, et al. A prospective comparison of magnetic resonance cholangiopancreatography with endoscopic retrograde cholangiopancreatography in the evaluation of patients with suspected biliary tract disease. Clin Radiol 1999;54:513-20.	Prospective	100	1
Kondo S, Isayama H, Akahane M, et al. Detection of common bile duct stones: comparison between endoscopic ultrasonography, magnetic resonance cholangiography, and helical-computed-tomographic cholangiography. Eur J Radiol 2005;54:271-5.	Observational (후향적)	28	4
Verma D, Kapadia A, Eisen GM, et al. EUS vs MRCP for detection of choledocholithiasis. Gastrointest Endosc 2006;64:248-54.	Meta-analysis	301	3
Aube C, Delorme B, Yzet T, et al. MR cholangiopancreatography versus endoscopic sonography in suspected common bile duct lithiasis: a prospective, comparative study. AJR Am J Roentgenol 2005;184:55-62.	Prospective	47	1
Lee J. Clinical manifestation and diagnosis.In: Chung JB, ed. Diseases of the gallbladder and bile ducts.1st ed. p.189-210, Seoul, Koonja, 2008	textbook	N/A	
Barkun JS, Barkun AN. Jaundice. In ACS surgery: principles and practice 2003	textbook	N/A	
Einstein DM, Lapin SA, Ralls PW, et al. The insensitivity of sonography in the detection of choledocholithiasis. AJR Am J Roentgenol 1984;142:725-728.	Observational (후향적)	138 pt with surgically proven choledocholithiasis	1
Vallon AG, Lees WR, Cotton PB. Grey-scale ultrasonography in cholestatic jaundice. Gut 1979;20:51-54.	Observational (전향적)	55 jaundiced patients	2

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Cronan JJ. US diagnosis of choledocholithiasis: a reappraisal. Radiology 1986;161:133-134.	Observational (전향적)	78 consecutive patients with choledocholithiasis	2
O'Connor HJ, Hamilton I, Ellis WR, et al. Ultrasound detection of choledocholithiasis: prospective comparison with ERCP in the postcholecystectomy patient. Gastrointest Radiol 1986;11:161-164.	Observational (전향적)	59 unselected symptomatic postcholecystectomy patients	1
Lapis JL, Orlando RC, Mittelstaedt CA, et al. Ultrasonography in the diagnosis of obstructive jaundice. Ann Intern Med 1978;89:61-63.	Observational (전향적)	47 patients with cholestatic jaundice	1
Baron RL, Stanley RJ, Lee JKT, et al. A prospective comparison of the evaluation of biliary obstruction using computed tomography and ultrasonography. Radiology 1982;145:91-98	Prospective	92 patients	1
Mitchell SE, Clark RA. A comparison of computed tomography and sonography in choledocholithiasis. AJR Am J Roentgenol 1984;142:729-733.	Observational (후향적)	54 patients	4
Pedersen OM, Nordgard K, Kvinnsland S. Value of sonography in obstructive jaundice. Limitations of bile duct caliber as an index of obstruction. Scand J Gastroenterol 1987;22:975-981	Observational (후향적)	176 patients with jaundice	4
Soto JA, Alvarez O, Munera F, et al. Diagnosing bile duct stones: comparison of unenhanced helical CT, oral-contrast enhanced CT cholangiography, and MR cholangiography. AJR Am J Roentgenol 2000;175:1127-1134.	Prospective	51 patients referred for endoscopic retrograde cholangiography of suspected biliary stones	1
Neitlich JD, Topazian M, Smith RC, et al. Detection of choledocholithiasis: comparison of unenhanced helical CT and endoscopic retrograde cholangiopancreatography. Radiology 1997;203:753-757.	Observational (전향적)	51 patients (aged 18-94 years) with clinically suspected choledocholithiasis underwent un	1

		enhanced helical CT image	
Tseng CW, Chen CC, Chen TS, et al. Can computed tomography with coronal reconstruction improve the diagnosis of choledocholithiasis? <i>J Gastroenterol Hepatol</i> 2008;23:1586–1589.	Observational – Dx	266 patients with clinically suspected choledocholithiasis undergoing abdominal CT before endoscopic retrograde cholangiopancreatography	1
Anderson SW, Rho E, Soto JA. Detection of biliary duct narrowing and choledocholithiasis: accuracy of portal venous phase multidetector CT. <i>Radiology</i> 2008;247:418–427.	Observational – Dx	94 patients who underwent abdominal 64-detector CT within 2 months of MRCP and/or ERCP	1
Anderson SW, Lucey BC, Varghese JC, Soto JA. Accuracy of MDCT in the diagnosis of choledocholithiasis. <i>AJR Am J Roentgenol</i> 2006;187:174–180.	Observational – Dx	72 patients underwent abdominal MDCT and ERCP within 3 months	1
Kim DI, Lee HS, Kim JN, et al. Role of Multidetector Computerized Tomography (MDCT) in Identification of Common Bile Duct Stone: Comparison with ERCP. <i>Korean J Gastrointest Endosc</i> 2007;35:235–242.	Observational – Dx	164 patients	2
Kiriyama S, Takada T, Strasberg SM, Solomkin JS, et al. TG13 guidelines for diagnosis and severity grading of acute cholangitis <i>J Hepatobiliary Pancreat Sci</i> 2013;20:24–34.	guideline		1
Pasanen PA, Partanen KP, Pikkarainen PH, Alhava EM, Janatuinen EK, Pirinen AE. A comparison of ultrasound, c	Observational – Dx	220 total patients.	2

<p>omputed tomography and endoscopic retrograde cholangio pancreatography in the differential diagnosis of benign and malignant jaundice and cholestasis. Eur J Surg 1993; 159(1):23–29.</p>		<p>Patients with jaundice (n=187) or cholestasis without jaundice (n=33)</p>	
<p>Chen WX, Xie QG, Zhang WF, et al. Multiple imaging techniques in the diagnosis of ampullary carcinoma. Hepatobiliary Pancreat Dis Int 2008; 7(6):649–653.</p>	<p>Observational – Dx</p>	<p>41 patients (all patients examined by US, and 39 of them received enhanced CT, 29 MRCP, and 25 ERC P)</p>	<p>2</p>
<p>Tongdee T, Amornvittayachan O, Tongdee R. Accuracy of multidetector computed tomography cholangiography in evaluation of cause of biliary tract obstruction. J Med Assoc Thai 2010; 93(5):566–573.</p>	<p>Observational – Dx</p>	<p>50 patients</p>	<p>2</p>
<p>Tseng CW, Chen CC, Chen TS, Chang FY, Lin HC, Lee SD. Can computed tomography with coronal reconstruction improve the diagnosis of choledocholithiasis? J Gastroenterol Hepatol 2008; 23(10):1586–1589.</p>	<p>Observational – Dx</p>	<p>266 patients; 163 choledocholithiasis patients divided into three groups</p>	<p>2</p>
<p>Bang BW, Jeong S, Lee DH, Kim CH, Cho SG, Jeon YS. Curved planar reformatted images of MDCT for differentiation of biliary stent occlusion in patients with malignant biliary obstruction. AJR 2010; 194(6):1509–1514.</p>	<p>Observational – Dx</p>	<p>173 patients</p>	<p>2</p>
<p>Anderson SW, Lucey BC, Varghese JC, Soto JA. Accuracy of MDCT in the diagnosis of choledocholithiasis. AJR 2006; 187(1):174–180.</p>	<p>Observational – Dx</p>	<p>72 patients 33 patients had scans performed with IV contrast agent only, 15 patients had scans pe</p>	<p>2</p>

		performed without I V contrast agent only, 24 had studies with and without an I V contrast agent	
Choi YH, Lee JM, Lee JY, et al. Biliary malignancy: value of arterial, pancreatic, and hepatic phase imaging with multidetector-row computed tomography. <i>J Comput Assist Tomogr</i> 2008; 32(3):362–368.	Observational – Dx	42 patients; 2 independent observers	2
Park HS, Lee JM, Choi JY, et al. Preoperative evaluation of bile duct cancer: MRI combined with MR cholangiopancreatography versus MDCT with direct cholangiography. <i>AJR</i> 2008; 190(2):396–405.	Observational – Dx	27 patients; 2 independent reviewers	2
Aube C, Delorme B, Yzet T, et al. MR cholangiopancreatography versus endoscopic sonography in suspected common bile duct lithiasis: a prospective, comparative study. <i>AJR</i> 2005; 184(1):55–62.	Observational – Dx	47 patients	2
Choi JY, Lee JM, Lee JY, et al. Navigator-triggered isotropic three-dimensional magnetic resonance cholangiopancreatography in the diagnosis of malignant biliary obstructions: comparison with direct cholangiography. <i>J Magn Reson Imaging</i> 2008; 27(1):94–101.	Observational – Dx	23 patients	2
Maurea S, Caleo O, Mollica C, et al. Comparative diagnostic evaluation with MR cholangiopancreatography, ultrasonography and CT in patients with pancreatobiliary disease. <i>Radiol Med</i> 2009; 114(3):390–402.	Observational – Dx	70 patients MRCP performed in all patients abdominal US: 55 patients (group 1) multiple CT: 37 patients (group 2)	2
Williams EJ, Green J, Beckingham I, Parks R, Martin D, Lombard M. Guidelines on the management of common bile duct stones (CBDS). <i>Gut</i> 2008; 57(7):1004–1021.	Review/Other – Dx	N/A	1
Oto A, Ernst R, Ghulmiyyah L, Hughes D, Saade G, Chaljub G. The role of MR cholangiopancreatography in the e	Review/Other – Dx	18 pregnant patients	4

valuation of pregnant patients with acute pancreaticobiliary disease. <i>Br J Radiol</i> 2009; 82(976):279–285.		nts had MRCP; 15 patients evaluated with US	
Hekimoglu K, Ustundag Y, Dusak A, et al. MRCP vs. ERCP in the evaluation of biliary pathologies: review of current literature. <i>J Dig Dis</i> 2008; 9(3):162–169	Observational – Dx	269 total patients	1
Lee DH, Lee JM, Kim KW, et al. MR imaging findings of early bile duct cancer. <i>J Magn Reson Imaging</i> 2008; 28(6):1466–1475.	Observational – Dx	17 patients; 2 reviewers	2
Masselli G, Manfredi R, Vecchioli A, Gualdi G. MR imaging and MR cholangiopancreatography in the preoperative evaluation of hilar cholangiocarcinoma: correlation with surgical and pathologic findings. <i>Eur Radiol</i> 2008; 18(10):2213–2221.	Observational – Dx	15 patients; 2 reviewers	2
Ryoo I, Lee JM, Chung YE, et al. Gadobutrol-enhanced, three-dimensional, dynamic MR imaging with MR cholangiography for the preoperative evaluation of bile duct cancer. <i>Invest Radiol</i> 2010; 45(4):217–224.	Observational – Dx	60 patients; 2 reviewers	2
Yu SA, Zhang C, Zhang JM, et al. Preoperative assessment of hilar cholangiocarcinoma: combination of cholangiography and CT angiography. <i>Hepatobiliary Pancreat Dis Int</i> 2010; 9(2):186–191.	Review/Other – Dx	13 total patients: 9 PTC, 1 ERCP, 3 MRCP	4
Bortoff GA, Chen MY, Ott DJ, Wolfman NT, Routh WD. Gallbladder stones: imaging and intervention. <i>Radiographics</i> 2000; 20(3):751–766.	Review/Other – Dx	N/A	5
Ripolles T, Ramirez-Fuentes C, Martinez-Perez MJ, Delgado F, Blanc E, Lopez A. Tissue harmonic sonography in the diagnosis of common bile duct stones: a comparison with endoscopic retrograde cholangiography. <i>J Clin Ultrasound</i> 2009; 37(9):501–506.	Observational – Dx	107 patients	2
Furukawa H, Ikuma H, Asakura-Yokoe K, Uesaka K. Preoperative staging of biliary carcinoma using 18F-fluorodeoxyglucose PET: prospective comparison with PET+CT, MDCT and histopathology. <i>Eur Radiol</i> 2008; 18(12):2841–2847.	Observational – Dx	72 patients	2
Seo H, Lee JM, Kim IH, et al. Evaluation of the gross type and longitudinal extent of extrahepatic cholangiocarcinomas on contrast-enhanced multidetector row computed tomography. <i>J Comput Assist Tomogr</i> 2009; 33(3):376–382.	Observational – Dx	56 patients; 2 reviewers	2