Conservative Management of Isolated Sectoral Duct Injury With Bile Leak (Type C Injury): Important and Essential Initial Step in the Management, Not an Option

Vishal Gupta · Abhijit Chandra

Received: 29 April 2011 / Accepted: 8 August 2011 / Published online: 16 August 2011
© 2011 The Society for Surgery of the Alimentary Tract

Dear Editor,

We read the article by Mazer et al.¹ with great interest. This study adds to the emerging evidence for the conservative management of isolated sectoral duct injury.² Isolated injury to the right sectoral duct may (Strasberg type C) or may not (Strasberg type B) present with bile leak. There is no universally accepted single modality of treatment for these injuries.³ Detected intraoperatively, these ducts may be ligated safely, thus actually converting type C injury into type B injury, with the patient usually remaining asymptomatic and the undrained liver becoming atrophied without major sequelae.⁴ However, some advocate repair in all the cases irrespective of the size of the duct.⁵

Few points need to be clarified before it can be concluded that conservative management is an important *option* for patients with an isolated right posterior bile duct injury as suggested by Mazer et al.¹

First, follow-up is very short with a mean of 8.2 months (2 to 14 months). Even after surgical repair, a minimum follow-up of 5 years is considered optimum.⁶ Second, three patients underwent biliary stenting. How stenting is useful in such cases, where by definition of Strasberg type B or C (all cases in this report), hepatoenteric continuity of aberrant sectoral or right hepatic duct is lost. These injuries are classically suspected when the biliary system is apparently normal on ERCP, in the presence of biliary leak. Did the biliary fistula respond to stenting in these cases? Third, results of this study are considered as “excellent”. Results of surgical repair are considered as excellent when liver enzymes and the biliary ductal system are normal in

an asymptomatic patient.⁷ Three out of five patients had elevated serum alkaline phosphatase on follow-up. This may be due to ongoing liver atrophy, and in such cases, gamma glutamyl transpeptidase may be more informative regarding the development of biliary stricture.

Lastly, it is concluded that the conservative management is an important *option* for patients with an isolated right posterior bile duct injury. In fact, conservative management with radiological and endoscopic interventions is an *essential initial step* in the management of all patients presenting with bile leak even if surgical repair is planned later on. This allows the local sepsis to subside allowing safe repair.⁵ In addition, delayed approach in such situation allows the fistula to close by itself, and if repair is deemed necessary, it can be performed on the dilated duct.⁷ In this series, all patients had bile leak, i.e. type C injury.

References

1. Mazer LM, Tapper EB, Sarmiento JM. Non-Operative Management of Right Posterior Sectoral Duct Injury Following Laparoscopic Cholecystectomy. J Gastrointest Surg. 2011 Feb 24. [Epub ahead of print]
2. Perera MT, Monaco A, Silva MA, Bramhall SR, Mayer AD, Buckels JA, Mirza DF. Laparoscopic posterior sectoral bile duct injury: the emerging role of nonoperative management with improved long-term results after delayed diagnosis. Surg Endosc. 2011 Mar 17. [Epub ahead of print]
3. Hadjis NS, Blumgart LH. Injury to segmental bile ducts. A reappraisal. Arch Surg. 1988 Mar; 123(3):351–335.
4. de Santibáñes E, Ardiles V, Pekolj J. Complex bile duct injuries: management. HPB (Oxford). 2008; 10(1):4–12.
5. Colovic RB. Isolated segmental, sectoral and right hepatic bile duct injuries. World J Gastroenterol. 2009 Mar 28; 15(12):1415–1419.
6. Bismuth H. Postoperative strictures of the bile duct. In Blumgart LH, ed. The Biliary Tract: Clinical surgery international. Edinburgh, Churchill Livingstone, 1982, pp 209–218.
7. Jarnagin WR, Blumgart LH. Benign biliary stricture. In Blumgart LH, ed. Surgery of the Liver, Biliary Tract and Pancreas, vol 1, 4th ed. Saunders Elsevier, 2007, pp 628–654.

V. Gupta (✉) · A. Chandra
Department of Surgical Gastroenterology, Chhatrapati Shahuji Maharaj
Medical University (Erstwhile King George Medical University),
Chowk, Lucknow 226003 Uttar Pradesh, India
e-mail: drvg77@rediffmail.com