Delayed Bile Leak in The Setting of Grade V Blunt Liver Trauma

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Background: Bile leakage is a known, but serious complication of abdominal surgery or trauma to the biliary system. The consequence of bile leaks can be serious and can lead to complications including infection resulting in sepsis. Furthermore, cases of delayed bile leaks are not common. Here, we describe a rare case of delayed bile leak in the setting of trauma following a motor vehicle accident (MVA).

Case Presentation: The patient is a 32-year-old female who initially presented for polytrauma secondary to MVA. Notably, the patient suffered multiple fractures, pneumothorax, and lacerations of the liver and spleen. Initial imaging described grade V hepatic trauma on the American Association for the Surgery of Trauma (AAST) scale with likely injury to the portal vein and traumatic proximal pancreatic laceration with no signs of bile leak. Magnetic resonance cholangiopancreatography (MRCP) was subsequently performed showing laceration of the pancreas without hemorrhage or fluid collection, with no indication of ductal disruption. Although she was initially recovering with liver enzymes trending downwards, repeat abdominal Computed Tomography (CT) performed two days after MRCP for abdominal distention showed full-thickness laceration of the pancreatic neck, peritoneal enhancement, and liver laceration with new concerns of pancreatic leak. Endoscopic retrograde cholangiopancreatography performed one week after admission confirmed pancreatic leak, and the patient underwent pancreatic and biliary sphincterotomy with pancreatic and common bile duct stent placement. The patient recovered and was discharged after seventeen days of admission.

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Conclusion: Urgent diagnosis and treatment of bile leaks can prevent adverse outcomes. This case highlights the importance of close clinical monitoring and meticulous physical exams while keeping ductal injury on the differential, even after initial negative imaging. Due to the correct diagnosis and prompt treatment, the patient recovered uneventfully and was discharged without further gastroenterological complications.

Keywords: Liver, Pancreatic Stent, Trauma, Gastroenterology, MVC

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