Delayed Cholecystectomy Management for Mirizzi Syndrome

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Background

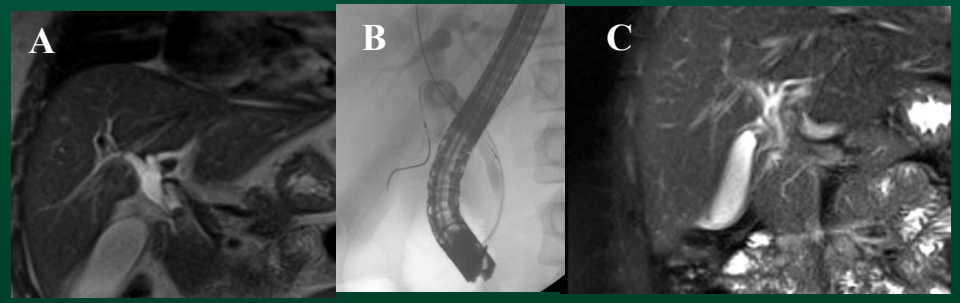
Mirizzi syndrome was first described in the early 1900s as a common hepatic duct obstruction secondary to compression from a chronic obstructing stone in the cystic duct. Five different types of this syndrome have been described. This syndrome has a range of clinical presentations, with obstructive jaundice and right upper quadrant pain as the most common. Despite decades of research, no standardized consensus on the surgical management of Mirizzi syndrome exists. Most case reports describe an open subtotal cholecystectomy as the most common surgical technique with few reports detailing successful laparoscopic interventions.

Case Presentation

This case report describes an 11 year old African American female who presented with severe right upper pain. Her labs were significant for a total bilirubin 3.1 mg/dl, CRP 3.13 mg/dl, AST 427 U/L, and ALT 275 U/L. A right upper quadrant ultrasound revealed cholelithiasis with a dilated common bile duct to 8mm, suspicious for choledocholithiasis. An MRCP revealed evidence for Mirizzi syndrome as seen in **figure A**. She was started on Zosyn for antibiotic coverage. The patient was consented and taken to the operating room for a diagnostic laparoscopy.

Intervention

Upon entering the abdomen, extensive inflammation was encountered. The laparoscopic case was aborted, and gastroenterology was consulted for decompression of the common bile duct via endoscopic retrograde cholangiography **(figure B).** A stent was passed in the cystic duct past the obstructing stone. There was notable bile and pus. A stent was also placed in the common bile duct. She was discharged home three days following ERCP without any abdominal pain and normalized total bilirubin. She had a repeat MRCP **(figure C)** and right upper quadrant ultrasound six weeks later which demonstrated gallbladder decompression and decreased common bile duct dilation. She then underwent delayed laparoscopic cholecystectomy with intraoperative cholangiogram. At this time, the gallbladder had minimal adhesions and normal biliary anatomy was encountered. Intraoperative cholangiogram revealed no filling defects and a patent common bile duct stent. Her cystic duct stent was removed laparoscopically. Her cystic duct stone was removed piecemeal. A PDS endoloop and clips were used to close the cystic duct. She tolerated the procedure well and reports no further symptoms or complications post operatively.



Discussion

This case illustrates a unique report of delayed, interval cholecystectomy for management of Mirizzi syndrome, which highlights a potential management strategy to avoid technically difficult laparoscopic cholecystectomy in the acute inflammatory period. Further research is needed to compare the outcomes and complications in patients who undergo immediate versus delayed cholecystectomy for Mirizzi syndrome. Future outcomes data may help build the foundation for an innovative treatment approach to reduce the morbidity from this severe inflammatory disease.

References

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