STUDENTS' CORNER
LETTER TO THE EDITOR

Laparoscopic Surgery: Stepping into a clip-less Cholecystectomy era

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Dear Editor, The introduction of laparoscopy to the surgical art is not new. Over the past few decades, operative laparoscopy has experienced remarkable advancements, enabling numerous complex procedures to be performed through this minimally invasive approach. Following its initial challenges, laparoscopic surgery has matured, evolving into a phase of gradual refinement, making it challenging to predict its future trajectory and long-term outcomes.

However, in a resource limited country like Pakistan, the full implementation and acceptance of this new surgical technique comparable to the conventional Open approach is still questionable, pertaining to different causes like general population awareness and economic hurdles. The provision of laparoscope by government in our institution at MTI Gomal Medical College has revolutionized the standard of care but it has some shortcomings too, in the form of structured training programmes for the surgical staff, inconsistencies in instrument standardisation, affordability and public acceptability. Different surgical procedures are being performed at our institution, Cholecystectomy being the most common. Laparoscopic cholecystectomy as gold standard offers better outcomes than open cholecystectomy, with less pain, shorter hospital stays, and quicker recovery, but requires advanced infrastructure and costly equipment. In a few cases of laparoscopy cholecystectomy performed at our setup, the surgical team faced the problem of post-operative complications, including infection and bile leakage.

During laparoscopic cholecystectomy, metallic clips are typically used to ligate the cystic duct and artery, with potential complication being clip slippage, a foreign body reaction that might be rarely a source of Hypersensitivity reaction,[1] the clips becoming a nidus for infection, and a remote possibility of clip erosion in surrounding structures if dislodged. Vessel sealing technologies, such as LigaSure and Harmonic scalpel, offer promising alternatives for cystic artery control and haemostasis, yet their high cost poses a significant barrier in low-resource setting. Additionally, the use of these energy devices is questionable for the control of extra-hepatic biliary channels. The alternative to these metal clips is absorbable suturing material such as Vicryl. Different studies have looked into the safety and feasibility of cystic duct control with suture ligation during laparoscopic cholecystectomy.[2-4] A study by Akhtar et al. concluded that biliary leakage occurs more frequently with clipped laparoscopic cholecystectomy for cholecystitis, supporting the adoption of clip-less technique in select patients to minimize complications and optimize patient outcomes.[5] So, our surgical team has begun employing the technique of securing cystic duct and cystic artery by Extracorporeal Roeder's knot with Vicryl-1, stepping towards a clip-less era in gallbladder surgery. The added benefits being increased surgeon confidence in knot security, reduced economic burden, and the absorbability of the suture material, which helps minimise the risk of post-operative bile leakage and re-admission.

In today's healthcare landscape, minimally invasive surgery is no longer a luxury but a vital necessity, that demands urgent attention and implementation, staff training through different workshops and adopting safe practices for patients to reduce procedure-associated morbidity.

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