Laparoscopic Cholecystectomy Using Standard Instruments through a Single Umbilical Incision: Feasibility in Jamaica

SO Cawich1, M Albert2, SK Mohanty3

Since the first four port laparoscopic cholecystectomy (4PLC) was performed in Jamaica in 1993 (1), the local experience has been well documented (2–5). Caribbean surgeons now accept 4PLC as the gold standard for benign gallbladder disease (6–10).

The first single port laparoscopic cholecystectomy (SPLC) in Jamaica was performed in 2009 (11), 12 years after first being described in 1997 (12). It has since been gaining popularity, although not yet as widely accepted as 4PLC.

It is clear that there are aesthetic advantages over conventional 4PLC (12). Three prospective randomized trials comparing pain scores in 239 patients have demonstrated a significant reduction in postoperative pain with SPLC versus 4PLC with similar operating time and morbidity (13–15). The available data suggest that both techniques are at least equivalent in safety (12–15).

There are several challenges to SPLC being widely performed in Jamaica. The most significant challenge is financial, highlighted by reports that 33% of patients choose an open approach to cholecystectomy because 4PLC is unaffordable (5). Specialized instrumentation may increase the cost further, making it poorly suited for our under-funded healthcare system (16, 17). However, SPLC has been performed locally without specialized visual systems or curved instruments (11). Although we used SILS ports (Covidien, Inc., Norwalk, CT, USA) in our first few cases, adding US$490.21 per case (11), we can abandon this in favour of described technique with low profile ports across an umbilical incision (18–20).

Restricted operating time is a consideration since long waiting lists prompted 14% of our patients to choose an open approach to cholecystectomy (5). It has been suggested that longer times required to complete SPLC further lengthen waiting lists. However, this is an institutional limitation and is not limited to SPLC alone. Moreover, the mean duration of SPLC reported in our setting is 65 minutes (11) and that is comparable to 4PLC in this setting (2–5).

Performing SPLC requires additional surgical skillsets, such as adapting to the counterintuitive hand movements, instrument collision and restricted movements with instruments passed through a single entry point. Therefore, the team must adapt to a view of the operating field parallel to working instruments, highlighting the need for an experienced cameraman to anticipate clashing and move the camera away from active instruments. Surgeons may hone these skills by extra-corporeal training with simulators or animal laboratories (20).

CONCLUSIONS

Despite operating in an under-funded environment, we can incorporate SPLC into our surgical armamentarium with minimal change to the existing hardware. As a prerequisite, surgeons with advanced laparoscopic skills and significant experience in conventional 4PLC should have extra-corporeal training with simulators or animal laboratories.

Authors’ note: There have been no sources of funding for this manuscript.

REFERENCES


From: 1Department of Clinical Surgical Sciences, The University of the West Indies, St Augustine, Trinidad and Tobago, West Indies, 2Department of Surgery, Florida State University, Tallahassee, Florida, USA and 3Department of Surgery, Cayman Islands Hospital, Grand Cayman, British West Indies.

Correspondence: Dr SO Cawich, Department of Clinical Surgical Sciences, The University of the West Indies, St Augustine, Trinidad and Tobago, West Indies. E-mail: socawich@hotmail.com