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AUTHOR RESPONSE TO “A NOVEL APPROACH FOR POSTOPERATIVE PAIN MANAGEMENT AFTER DISCHARGE”

Thanks to Dr. Sohanpal for his response. I agree that many surgeons have limited experience in the management of complex pain patients and should consider having these patients seen preoperatively in a pain service setting (such as a transitional pain service) to optimize postoperative outcomes. Patients with issues of dependency, chronic pain, and those on cannabinoids can be challenging to manage after surgery.

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Competing interests: None declared.

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LEVER EFFECT AND THE OPTICAL ILLUSION OF SAFETY IN LAPAROSCOPIC CHOLECYSTECTOMY

Congratulations to Dr. Sutherland and colleagues for putting words to a problem that we have all felt since the introduction of the laparoscopic approach to cholecystectomy over 30 years ago.¹ Dissection to the left of

the extrahepatic bile duct may create the optical illusion of safety. In the early days, many patients who should have had simple cholecystectomy were referred with bile duct injury. I reported to the annual meeting of the general surgery section of the Royal College that it could be due to lack of awareness that the load force at the end of the laparoscopic instrument is greater than the effort force applied to the handle.² The lever effect increases the retraction force by the ratio of the length of the instrument outside of the body divided by the length inside, usually about 3:1. The fulcrum, which is the body wall, also permits traction to be applied in the lateral-inferior direction, as described by Sutherland and colleagues, more easily than in open cholecystectomy.

I advise my trainees to ask the critical question, rather than look for the critical view, before they clip and cut anything: Is there a route for this structure (artery or bile duct) to return to the liver? If the answer is yes, the structure might be the right hepatic artery or the extrahepatic bile duct. The area in which the structure might be attached to the liver requires further careful dissection until the team answers no to the critical question.

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AUTHOR RESPONSE TO “LEVER EFFECT AND THE OPTICAL ILLUSION OF SAFETY IN LAPAROSCOPIC CHOLECYSTECTOMY”

I thank Dr. McAlister for his letter commenting on our article. He brings up 2 important points that were not mentioned in the manuscript. The “lever effect” that the long laparoscopic instruments have on increasing the force at the instrument tip is certainly an underappreciated fact. Indeed, this may account for the difficulty many residents have in learning this procedure. Clearly, the harder one pulls on Hartman’s Pouch, the more the bile duct kinks, producing an increasingly convincing illusion.

Experienced surgeons develop many tricks that help them avoid mistakes, and these tricks are not mutually exclusive. We routinely use B-SAFE landmarks and the critical view of safety. Many tricks are subconscious and do not get passed on to our trainees. Looking for a route for any structure to return to liver is a “McAlister Wisdom” that we should impart to all our residents.

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