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Minimally invasive pancreatic surgery: consideration for future clinical trials

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Dear Editor,

We read the latest meta-analysis by Pfister *et al.* with great interest[1]. Establishing the safety of pancreatic surgery methods is an important finding and the authors are to be commended for this. We would like to further highlight limitations of the analysed methods and to offer a more in-depth insight into the metrics of success in pancreatic surgery.

Robotic surgery, thanks to its intrinsic characteristics, potentially offers more dexterity and better field of vision compared to laparoscopic surgery. Those aspects are of particular importance in hepatopancreatobiliary surgery, because it is a highly demanding surgery both in terms of physical and psychological effort of the surgeon and the technical complexity of most operations. We believe that laparoscopic and robotic surgery should be separated in statistical comparisons, as despite their shared minimally invasive character, the two methods confer unique benefits. This, combined with the lack of the minimum procedural volume requirement among surgeons participating in the randomized trials included in the meta-analysis, further complicates accurate assessment of surgical techniques.

Moreover, the outcomes included in the meta-analysis, such as length of hospital stay, estimated blood loss, morbidity rate and mortality rate, reflect metrics of technical proficiency. While they are important in evaluating the safety of minimally invasive techniques, a move towards metrics of technical mastery, such as long-term oncological outcomes and quality-of-life outcomes, should also be considered. Due to the inherent differences between laparoscopic and robotic surgery, pooling outcomes of both minimally invasive techniques, with regards to these outcomes, would further hinder assessment of the potential benefits of robotic surgery.

Going forward, there is a need for more robust trials in pancreatic surgery that have methodological rigour allowed for pooled comparisons. Only by separating minimally invasive techniques, and assessing not only the basic outcomes of technical proficiency but also moving towards assessing outcomes associated with technical mastery, can the true benefits of novel methods be elucidated.

Reference

1. Pfister M, Probst P, Müller PC, Antony P, Klotz R, Kalkum E *et al.* Minimally invasive *versus* open pancreatic surgery: meta-analysis of randomized clinical trials. *BJS Open* 2023;**7**: zrad007

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