

## LETTER TO THE EDITOR

## NEEDLESCOPIC SURGERY-A STEP FORWARD IN MINIMAL INVASIVE SURGERY

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*'The ultimate craftsman is one who leaves no trace.'*  
Sun Tzu and the art of War

Minimal invasive surgery is the invention of a new era in the field of surgery. The benefits of minimal surgical trauma and better cosmesis have established superiority of laparoscopy over conventional open techniques. This has driven surgeons toward development of new horizons such as minilaparoscopy, microlaparoscopy or needlescopic surgery. Needlescopic surgery has been in practice since 1990s but still there is lack of enough literature supporting its benefits over conventional laparoscopy.<sup>1</sup>

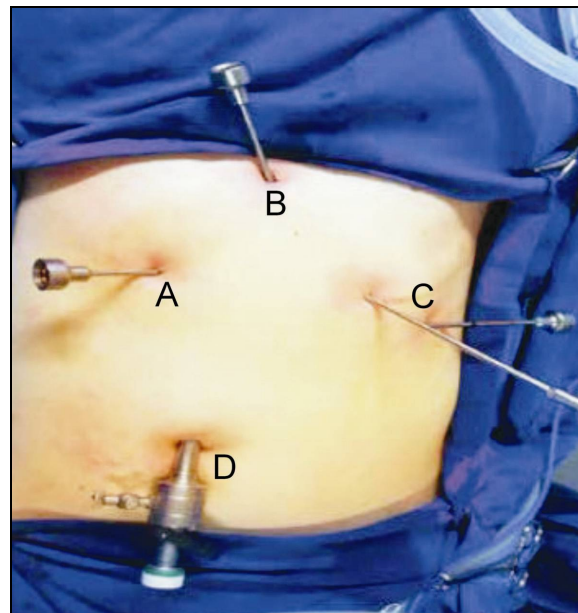
Needlescopic surgery employs the use of 3mm or smaller ports and instruments instead of the 5mm-12mm ports used in conventional laparoscopy.<sup>1,2</sup> It is performed by inserting narrow guide tubes or ports through the incisions and then passing slender instruments through the tubes (Figure). The incisions are so small that there are virtually no scar marks after one month. Initially needlescopic surgery was started strictly with all port sites 3 mm and smaller but later difficulty in specimen extraction, control of haemorrhage and application of staplers and clips allowed the use of one 10-12mm port. This introduces the concept of a cosmetically acceptable escape hatch. A 10-12mm escape hatch at umbilicus can provide surgeons the leverage of better haemostasis, use of staplers and clips, specimen extraction and better operative environment control without compromising the impeccable cosmesis.

A variety of procedures have been reported to be successfully done by needlescopic surgery. These include needlescopic appendectomy, cholecystectomy, hernia repair, bullectomy, thyroid tumour and axillary lymph node dissection, splenectomy and adrenalectomy.<sup>2,3</sup> The limitations of needlescopic surgery are the durability and strength of instruments, limited tissue manipulation, hindrance in visualization and decreased functionality.<sup>4</sup> However with time as experience and expertise with needlescopic surgery

improves and evidence evolves the superior benefits of this technique can be signified.

**Keywords:** Needlescopic surgery, Laproscopic, Mini-laparoscopy

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**Figure-1: Port replacement (A, B, C: 3 mm ports, D: 10 mm port) in needlescopic cholecystectomy**

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