

Three-way Stopcock: An Effective Air-tight Connector for Laparoscopic Gas Insufflation

Sir,

Laparoscopic surgery has become gold standard surgical care in dealing certain pathologies particularly the benign diseases of gall bladder. Although laparoscopic cholecystectomy is costlier than its open counterpart, it does provide a much better quality-of-life to the patient. This has led to an increase in laparoscopic operations.^[1,2] To cut-down the surgical expenditure, particularly in the developing world, the instruments are frequently sterilized and reused multiple times. However, by doing so, the connecting nozzle of the CO₂-insufflations tube frequently becomes loose and ill-fitting on the valve of the laparoscopic cannula. This leads to frequent disconnection of gas inflow tubing with resultant loss of pneumoperitoneum amounting to rising frustration and chaos in the surgical team. To encounter this problem we have been using the three-way stopcock with spin-lock, which fits snugly to both the trocar and tubing nozzle [Figure 1]. As such, we prefer to use the stopcock in the peripheral placed ports on metallic/plastic cannulas; this methodology circumvents the rapid fogging of the “cold” laparoscopic lens that enters the “warm” abdominal cavity, especially when the umbilical port is used for gas inflow. Furthermore, such a three way bears the weight of gas tubing without “sinking” with the attached cannula. This simple assembly has worked rather effectively in over 3000 laparoscopic procedures done by us. Apart from this, the other portion of that stopcock can be used to vent-out the surgical smoke by just a turn of the knob, thus, saving the operative time further, especially at the end of a lengthy laparoscopic surgery.



Figure 1: Conventional laparoscopic cholecystectomy being carried out. Note the location of the three-way stopcock with spin-lock (arrow) and gas cable which we prefer to use with peripheral port

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