

What is the Optimal Skin Closure Technique for 5 mm Laparoscopic Port-site? – A Systematic Review and Meta-analysis

Nusaibah Mohd Zulkifli, Mukhri Hamdan, Siti Zawiah Omar

University of Malaya, Kuala Lumpur

ABSTRACT

Background: As laparoscopy has become the access of choice even in complex abdomino-pelvic surgery cases and more abdominal access ports have been used to assist with the surgery, the concern has now diverted into the cosmetic outcome of the skin closure. There are various techniques available, but it is mainly based on the surgeon's preference and ultimately patients' satisfaction and to date, there is no "gold standard" on the technique particularly in small 5 mm laparoscopic port-site. **Objective:** To evaluate the optimal skin closure technique for small 5-mm laparoscopic port site wounds between sutured [subcuticular (SC) or transcutaneous (TC)] and sutureless [Adhesive Skin Tape (ST) or Tissue Adhesive (TA)] method. **Methods:** A total of 1053 papers were identified through electronic search and after screening, 5 studies (all RCT) were included for data synthesis. The PRISMA guidelines for randomised controlled trials were used to examine the quality of the studies. All suitable data were extracted and analysed using Review Manager 5.3 software. **Main Results:** We found a total of five studies comparing sutured (n=367) with sutureless (n=266) techniques. No studies compared closure with non-closure methods. From the studies using sutures, TC has better cosmetic outcome than SC (MD -0.79 [-1.45, -0.13], n=104) & (OR 1.93 [1.29, 2.99], n=118). In sutureless group, ST has comparable cosmesis with TA (OR 0.68 [0.28, 1.64], n=88) but less reported pain (OR 5.75 [1.14, 28.88], n=88). Compared with sutured group, TA has comparable cosmetic outcome (MD -0.8, [-4.44 to 2.84], n=112) and no infection or complication such as hernia were observed in both techniques. Similarly, compared with TC & SC, ST has comparable cosmetic outcome (MD 0.25 [-0.48, 0.98]), n=75 and (MD -0.54 [-1.13, 0.05]), n=75 respectively. Similarly no infection or complications were observed in these methods. Closure time were comparable between sutured group and TA (MD 8.4 [-1.27, 18.07]), n=89) but slightly longer than ST (MD 9.7 [0.9, 18.5]), n=89). **Limitations:** Despite the nature of the randomised included studies, the results of this study are still subjected to confounders relating to clinical and statistical heterogeneity. The studies reported the outcomes differently. **Wider Implications of Findings:** Conventional suturing – TC is still an optimal 5 mm laparoscopic skin closure technique. However, sutureless methods – TA and ST are able to eliminate risk of needle stick injury. The material cost of TA is higher than sutures or ST. Further trials should be conducted to evaluate total cost effectiveness.

Pneumoperitoneum in Postmenopausal Women: A Diagnostic Dilemma

Nur Azreen Ahmad¹, Lee Chui Ling¹, Bong Ye Chen², Badrul Zaman bin Muda¹, Ghazali Ismail¹

¹Department of Obstetrics and Gynaecology, Hospital Sultan Ismail, Johor, Malaysia, ²Department of Surgery, Hospital Sultan Ismail, Johor, Malaysia

ABSTRACT

Spontaneous uterus perforation due to pyometra is a rare entity, with incidence of 0.01%-0.05% commonly in elder women. Few reports exist in relation to malignancy of the genital tract, radiotherapy and infection. There have been less than 30 cases reported in the English literature regarding perforation of pyometra resulting pneumoperitoneum. Hereby, we report a case of spontaneous uterine rupture of pyometra that presented as an acute abdomen. A 59 years old lady, para 5 postmenopausal for 6 years presented to the emergency department with acute abdominal pain and abdominal distension for the past 1 week. She was suffering from diabetes, hypertension and diverticular disease. On abdominal examination, the lower abdominal quadrant was tender with rebound tenderness suggesting peritonitis. Ultrasound findings revealed two hypochoic masses at the fundal and posterior part of uterus suggesting degeneration changes of fibroid. This prompted a CT scan which showed features of peritonitis and extra peritoneal air. An exploratory laparotomy was performed under the diagnosis of perforated viscus. Intraoperatively, the abdominal cavity was filled with purulent discharge of 700cc. Other gut structures showed no signs of perforation. The uterus was found to have fundal and posterior perforation with purulent material extruding from the uterine cavity. Extrafascial total abdominal hysterectomy with bilateral salpingoophorectomy was performed by the gynaecology team. HPE revealed acute suppurative inflammation of the uterine myometrium with no evidence of malignancy. The clinical diagnosis of rupture of the uterus can be challenging as most of the cases present as initial diagnosis of gastrointestinal perforation.