



C-Gyn 7

Use of the Veress needle to obtain pneumoperitoneum prior to laparoscopy

Consensus statement of the Royal Australian & New Zealand College of Obstetricians & Gynaecologists (RANZCOG) and the Australian Gynaecological Endoscopy Society (AGES).

Laparoscopy using the Veress needle has been performed by gynaecologists since 1970. Members in gynaecological training and Fellows of the RANZCOG have been trained in insertion of the Veress needle with the same skill and care as when taught peritoneal entry at laparotomy by consultants.

Teachers adopt specific techniques and guidelines when instructing junior doctors in the application of the Veress needle. These include amongst others: intra-umbilical incision, direction away from major vessels, modification of the technique or consideration of alternative sites following previous surgery and consideration under some circumstances of the use of micro-laparotomy technology when underlying adhesions are suspected.

In gynaecological practice, laparoscopy is a procedure which may need to be repeated several times over a patient's lifetime (eg for infertility, endometriosis, and/or pelvic pain).

Adhesion formation is rare as a result of a repeated use of closed laparoscopy whereas adhesion formation is more likely with Hasson technique.

Complication rates from the Veress needle insertion are reported to be in the order of 1:1000-1500. The method used to obtain pneumoperitoneum should remain at the discretion of the surgeon, depending on skill, individual case judgement and previous training.

AGES Entry Guidelines

Intraumbilical Veress Needle Entry

This technique of inserting the Veress needle has been developed as a guideline by the Australian Gynaecological Endoscopy Society.

Preparation

Patient cleaned, draped and bladder emptied. No tilt. Palpation of the aorta and sacral promontory if possible.

Instrumentation

Minimal equipment standards. Veress needle: assess sharpness and spring mechanism prior to insertion. Gynaecologists should ask for a disposable Veress if not happy with the state of the reusable entry Veress that is handed to them.

Insufflator and tubing- assess correct connections and free flow of CO₂ with Veress attached. Assess baseline pressures in system.

Light lead, camera and laparoscope- produces adequate lighting, resolution and white balance system.

Trocars- correctly fitting with sharp tips.

Scalpel blade- size 15 or size 11 preferable.

Incision

Intra-umbilical incision of dermis. Preferable technique of the blade cutting up and out from centre of umbilicus.

Insertion of Veress

- Tap open
- Insertion perpendicular to skin, aiming for centre of the pelvis (with/without abdominal wall elevation dependant on patient habitus)
- Constant gentle pressure
- 2 'pops' may be felt (fascia and peritoneum)
- If inserted directly through the base of the umbilicus only 1 pop maybe felt
- Cease insertion as soon as peritoneal entry achieved

Test placement

Gas pressure- observe patient pressure and flow. These should be adequate assessments of whether the Veress needle is in the intra-abdominal space (in the correct position). Some gynaecologists may chose to also perform an aspiration test, syringe test or swinging needle test. These extra tests are not mandatory.

If placement of the Veress needle fails after 3 attempts consider abandoning the procedure or look at alternative entry methods or ask for senior assistance.

Insufflation

Commence insufflation at 1 litre per minute, check loss of liver dullness (400mls insufflated). Initial pressure should be under 8mm Hg. Sometimes it can be a fraction higher if the patient is significantly overweight. Volume insufflated should be sufficient to allow splinting of the abdominal wall for initial port entry without any anaesthetic complications. Some gynaecologists may choose to hyperdistend the abdominal cavity to an insufflation pressure of 25mm Hg before inserting the ports. Once the ports have been inserted this insufflation pressure can then be reduced to 15mm Hg.

Insertion of trocar

Perpendicular to skin, then aiming for the centre of the pelvis. Finger down trocar to act as guard. Constant pressure and/or twisting motion. Cease trocar insertion as soon as tip of trocar is in the peritoneal cavity. Insert laparoscope to confirm cannula is in the peritoneal cavity. Inspection should then occur with the laparoscope to 360 degrees. This is to check underlying bowel and vascular structures for possible injury.

Alternative Entry Techniques

- Insertion of Veress needle at Palmer's point
- Hasson open laparoscopy technique
- Direct entry technique
- Suprapubic entry of Veress needle

Further reading

A consensus document concerning laparoscopic entry techniques: Middlesbrough, March 19-20 1999.

Available from AGES website <http://www.ages.com.au/>

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