Diagnostic laparoscopy in Gynaecologic surgery

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Executive Sponsor:	Chief Executive
Approved By:	**Health Board**
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Target Audience:

People who need to know about this document in detail	For all medical staff involved in undertaking Diagnostic laparoscopy in Gynaecologic surgery
People who need to have a broad understanding of this document	Executive Directors *Chief Operating Officer*
People who need to know that this document exists	All staff involved Diagnostic laparoscopy in Gynaecologic surgery

Integrated Impact Assessment:

Equality Impact Assessment Date & Outcome	**Date:** **Outcome:**
Welsh Language Standard	Choose an item.
Date of approval by Equality Team:	(00/00/0000)
Aligns to the following Wellbeing of Future Generation Act Objective	Choose an item.

Disclaimer:
If the review date of this document has passed please ensure that the version you are using is the most up to date version either by contacting the author or CTM_Corporate_Governance@wales.nhs.uk

COMPONENTS:

A policy must contain the following components and must also be written to include the values and behaviours of the organisation wherever relevant:

It is accepted that for Clinical Policies and or other Written Control Documents (Procedures, Guidance etc.) the policy components below may not all be relevant.

For guidance on Clinical Policy Development please contact:

CTM_ClinicalPolicies@wales.nhs.uk

For guidance on Non Clinical Policy Development please contact:

CTM_Corporate_Governance@wales.nhs.uk

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Guideline Definition

Clinical guidelines are systemically developed statements that assist clinicians and patients in making decisions about appropriate treatments for specific conditions.

They allow deviation from a prescribed pathway according to the individual circumstances and where reasons can be clearly demonstrated and documented.

Purpose

To ensure women presenting to CTM UHB having a diagnostic laparoscopy have access to standardised care according to evidence based practice

Scope

This policy applies to all healthcare professionals in all locations including those with honorary contracts

Roles and Responsibilities

In seeking further advice on any uncertainties contained in this document, or if you feel that there is new or more updated advice it is your responsibility to contact the guideline author or Approval Group manager so that any amendments can be made.

The guideline Approval Group is responsible for disseminating this guideline to all appropriate staff.

The guideline author or a named alternative is responsible for updating the guideline with any amendments that they become aware of or are highlighted to them.

All health professionals are responsible to ensure that the guideline is utilised effectively, and to ensure that they are competent and compassionate in the implementation of it.

Training Requirements

There is no mandatory training associated with this guideline.

Monitoring of Compliance

- By audit and review of complaints relating to miscarriage diagnosis and management.
- The Governance Department will collate any complaints and distribute to the relevant individuals for comments, and share any learning points.
- The Service Lead will oversee any governance issues, make relevant recommendations to the directorate, and advise the Clinical Director or the directorate of any matters that require implementation. The Health Board reserves the right, without notice, to amend any monitoring

requirements in order to meet any statutory obligations or the needs of the organisation

Complaints

All complaints should try to be resolved with the patient during any contact to avoid escalation. There concerns should be listened to and documented. If it is not possible to address any concerns at the time, or if the complaint is of a serious nature, the patient's complaint should be discussed with the consultant in charge for the day, or the patient should be given details of how to raise a formal complaint via the local governance department.

Diagnostic laparoscopy in Gynaecologic surgery

Introduction

Laparoscopic surgery is currently the most commonly performed procedure in

Gynaecology. It can be used for both benign and malignant conditions

Laparoscopic surgery is characterized by short hospital stay, rapid postoperative recovery, less postoperative pain and lower risk of complications compared to laparotomy

Proper preoperative preparation and safe entry technique is required to minimize the risk of intraoperative complications in particular bowel. Bladder and vascular injuries.

Preoperative Evaluation and Preparation

- Medical comorbidities: Woman should be fit to tolerate the pneumoperitoneum associated with laparoscopic surgery.
- Previous surgeries will affect the choice of site of primary trocar entry of the primary
- Pregnancy test for all women in reproductive age group
- Antibiotic prophylaxis (if indicated)
- Assessment for the risk of Thromboembolism
- Bowel preparation is no longer standard practice prior to gynaecologic surgery.

Patient Positioning and Preparation

- Supine or dorsal lithotomy position for laparoscopic surgery.
- Carefully position the patient to avoid neurologic injury, provide for ergonomic surgeon positioning, and allow adequate access to the vagina, if necessary.
- The patient's arms may be tucked carefully by her sides with appropriate padding and access to intravenous lines. If the arms are tucked, they are placed in military position (palms facing toward lateral thighs) with padding protecting the posteromedial aspect of the elbows, wrists and hands.
- Alternatively, if the arms are abducted and placed on arm boards, careful attention should be paid to maintaining neutral shoulder positioning at a <90° angle to avoid brachial plexus injury
- If the dorsal lithotomy position is used, the patient's legs are placed in booted stirrups (e.g., Allen-type stirrups). Stirrups may be fixed or allow for adjustment of the leg position during the procedure. It is important to maintain moderate flexion at the knee and hip with minimal abduction or external rotation at the hip
- It may also be helpful to utilize a bolster underneath the patient's buttocks to elevate the hips and enhance mobilization of intestines into the upper abdomen. The buttocks should be a few centimetres beyond the edge of the table to allow uterine manipulation.
- At the start of the procedure, the table should be in level position, with the height lowered to allow for relaxed arm positioning for all operators.
- Trendelenburg position is typically used to displace the intestines to allow visualization of the pelvic viscera.

- A bladder catheter is useful to decompress the bladder. Bladder distension increases the risk of bladder perforation and may obscure the operative field.

Uterine cannula and manipulators

It is used to manipulate the uterus and thereby facilitate access to and inspection of pelvic structures.

Most cannulas also permit injection of a dye solution to assess tubal patency.

A uterine cannula should not be used for uterine manipulation when:

- An intrauterine pregnancy is suspected
- The uterus is absent
- Anomalies exist that prevent exposure of or access to the cervix
- The patient is prepubescent

Port Entry Sites

Umbilical access

Gynaecologic laparoscopic entry is commonly at or through the umbilicus

Initial entry can also be performed through other sites on the abdominal wall or through the vagina or uterus. It is important to consider alternative access sites when umbilical entry is risky or difficult.

The traditional technique for laparoscopic entry blindly pass a sharp Veress needle, typically at the umbilicus, insufflate, and then to pass a sharp trocar.

Other techniques include direct entry methods, such as open access (Hasson) or the use of optical trocars or radially-expanding trocars

Trocar placement

Port placement typically involves a primary port at the umbilicus with two accessory ports in the bilateral lower quadrants

To avoid injury to nerves or blood vessels in the abdominal wall (notably the ilioinguinal and iliohypogastric nerves, superficial and inferior epigastric arteries), the lower quadrant ports are placed approximately 2 cm medial and at or superior to the anterior superior iliac spine, lateral to the border of the rectus

A fourth port may be useful, particularly in cases involving extensive dissection or laparoscopic suturing, and can be placed suprapubically or in the lateral abdominal wall at the level of the umbilicus.

In cases of enlarged uteri where the fundus approaches the level of the umbilicus, it may be necessary to place the ports higher on the abdominal wall to ensure proper distance for visualization and instrument operation.

Non-umbilical access

Indicated when there is an increase in the risk for complications when an umbilical access site is used.

- Periumbilical adhesions (previous history of bowel obstruction or a history of prior intraabdominal surgery, malignancy, or infection)
- Periumbilical mesh
- Umbilical or ventral hernia
- Previous ventral hernia repair
- Large pelvic mass (Puncture of a mass should be avoided as it may lead to bleeding or to rupture of an ovarian malignancy, thereby worsening prognosis)
- Pregnancy.
- Obese OR extremely thin women

Sites to be considered as alternative entry points

Palmar point: The left 9th intercostal space or the left costal margin at Palmer's point (3 cm below the left costal margin in the left midclavicular line)

Other sites are predominantly used only for insufflation in gynaecology, followed by trocar insertion at Palmer's point or the umbilicus. This site is contraindicated in patients with previous splenectomy. Care should be taken to empty the stomach prior to attempting insertion at this site.

An alternate site has been proposed that is lower and more lateral in position compared with Palmer's point and may therefore be more easily used as the main operating port throughout the surgery.

Following initial entry, it is often possible to use the umbilicus as a secondary port site in patients with suspected adhesive disease. Once the camera is in place, the peritoneal surface of the umbilicus may be found to be free of adhesions or, in many cases, adhesions can be removed. In such patients, an umbilical trocar and port can then be placed safely under direct vision if this is surgically useful.

The open (Hasson) technique or entry at Palmer’s point are recommended for the primary entry in women with morbid obesity. If the Veress needle approach is used, particular care must be taken to ensure that the incision is made right at the base of the umbilicus and the needle inserted vertically into the peritoneum.

The Hasson technique or insertion at Palmer’s point is recommended for the primary entry in women who are very thin

Secondary ports entry

Secondary ports must be inserted under direct vision perpendicular to the skin, while maintaining the pneumoperitoneum at 20–25 mmHg.

During insertion of secondary ports, the inferior epigastric vessels should be visualised laparoscopically to ensure the entry point is away from the vessels.

During insertion of secondary ports, once the tip of the trocar has pierced the peritoneum it should be angled towards the anterior pelvis under careful visual control until the sharp tip has been removed.

Secondary ports must be removed under direct vision to ensure that any haemorrhage can be observed and treated, if present.

Complications

Serious risks

The overall risk of serious complications from diagnostic laparoscopy is approximately 2 in 1000 women (uncommon), these include:

- This includes damage to the bowel, bladder, ureters, uterus or major blood vessels which would require immediate repair by laparoscopy or laparotomy (open surgery is uncommon). However, up to 15% of bowel injuries might not be diagnosed at the time of laparoscopy.
- Failure to gain entry to the abdominal cavity and to complete the intended procedure.
- Hernia at site of entry (less than 1 in 100; uncommon).
- Thromboembolic complications (rare or very rare).
- Death; 3–8 in 100 000 women (very rare) undergoing laparoscopy may die as a result of complications.

Frequent risks

Frequent risks are usually mild and self-limiting. They may include:

- Bruising
- Shoulder-tip pain
- Wound gaping Infection.

Auditable standards

- Documentation of appropriate counselling.
- Clinical incident reporting of all adverse events or complications

References

Preventing entry related gynaecological laparoscopic surgery; Green top guideline no. 49 May 2008

Diagnostic laparoscopy; consent advice No. 2, June 2017. Accessed via www.RCOG.org.uk/consent advice

Overview of Gynaecologic laparoscopic surgery and non-umbilical entry sites. www.UpToDate.com Accessed 12/07/2021