Laparoscopic Appendicectomy

R. K. Mishra
Laparoscopic Appendicectomy

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Laparoscopy Hospital, New Delhi  Essentials of Laparoscopic Surgery
Indications

- Female of reproductive age
- Pre-menopausal age
- Suspected appendicitis
- Working status
- Obese patients
- Cirrhosis & Sickle cell disease
- Immune-compromised
Indications

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- Pre-menopausal age
- Suspected appendicitis
- Working status
- Obese patients
- Cirrhosis & Sickle cell disease
- Immune-compromised
Contraindications

- Complicated appendicitis
- COPD or Cardiac disease
- Generalised peritonitis
- Previous extensive lower abdominal surgery
- Hypercoagulable states
- Stump appendicitis after previous incomplete appendectomy
- Advanced stage of pregnancy
- Lymphangioma of mesentery
- Chronic inflammatory disease
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- Generalised peritonitis
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- Lymphangioma of mesentery
- Chronic inflammatory disease
Surgical Anatomy

- Ileo-colic Artery
- Appendicular Artery
- Appendicular Artery
- Appendix
Surgical Anatomy

Ileo-colic Artery
Appendicular Artery
Appendicular Artery
Appendix
Surgical anatomy
Surgical anatomy

- 5mm instrument port
- Camera port
- 10mm instrument port

Vermiform appendix fixed retrocecal

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Essentials of Laparoscopic Surgery
Position of Surgical team
Position of Surgical team
Position of Surgical team in Female

Female patient should be kept in lithotomy position incase uterine manipulator is required.
Position of Surgical team in Female

Female patient should be kept in lithotomy position incase uterine manipulator is required
Ports / Instruments

• Total 3 trocar should be used

• Two 10mm, umbilical and left lower quadrant trocar and

• One 5 mm Right upper quadrant trocar

• The right upper quadrant trocar can be moved below the bikini line in females
Ports / Instruments

- Total 3 trocar should be used
- Two 10mm, umbilical and left lower quadrant trocar and
- One 5 mm Right upper quadrant trocar
- The right upper quadrant trocar can be moved below the bikini line in females
Alternative Port Position

- Mc Burney’s point
- 10mm
- 5mm
- 5mm

Monitors
Surgeon
Assistant
Nurse
Alternative Port Position

- Monitor
- Mc Burney's point
- 10mm
- 5mm
- Laparoscope
- Surgeon
- Assistant
- Nurse

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Alternative Port Position

Alternative port position for Laparoscopic Appendicectomy
Alternative Port Position

Alternative port position for Laparoscopic Appendicectomy
Danger of Alternative Port Position

If suprapubic port is used bladder should be taken care of.
Danger of Alternative Port Position

If suprapubic port is used bladder should be taken care of
Port Position in Difficult Exposure

A fourth port can be introduced in difficult appendix
Port Position in Difficult Exposure

A fourth port can be introduced in difficult appendix
Procedure

- An atraumatic grasper is inserted via the RUQ port.
- The cecum is retracted upward toward the liver.
- The appendix is grasped at its tip with a 5 mm claw grasper via the RUQ trocar. It is held in upward position.
Procedure

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Procedure

- Create a mesenteric window of 1 cm size behind the base of the appendix as close as possible to the base of the appendix
- Extra-corporeal knotting performed for mesoappendix as well as appendix
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Procedure

- The appendix is now amputated from the GIT.
- The appendix held by the grasper and is placed into the specimen bag.
- Close the wound Using vicryl for rectus and Un-absorbable intra-dermal or Stapler for skin.

Video demonstration of extracorporeal knot
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Video demonstration of extracorporeal knot
Procedure

Video demonstration of laparoscopic appendicectomy
Procedure

Video demonstration of laparoscopic appendicectomy

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Hook can be used for dissection of Mesoappendix
Hook can be used for dissection of Mesoappendix
Pre-tied Endoloop for ligation of Appendix
Tying roaders knot over finger of assistant
Tying roaders knot over finger of assistant
Stapler Appendectomy

Appendix is held by grasper
Stapler Appendectomy

Appendix is held by grasper
Stapler Appendectomy

A window is created in mesoappendix.
Stapler Appendectomy

A window is created in mesoappendix
Stapler Appendectomy

Linear stapler is used to dissect appendix
Stapler Appendectomy

Linear stapler is used to dissect appendix
Stapler Appendectomy

Linear stapler is used to dissect mesoappendix
Stapler Appendectomy

Linear stapler is used to dissect mesoappendix
Stapler Appendectomy
Stapler Appendectomy
Taking the appendix out

Video showing extraction of appendix
Taking the appendix out

Video showing extraction of appendix
Appendix is taken out hiding inside reducer
Appendix is taken out hiding inside reducer
Retrocecal Appendix

Video showing laparoscopic removal of retrocecal appendix
Retrocecal Appendix

Video showing laparoscopic removal of retrocecal appendix
Procedure Two Port Technique

Two port laparoscopic appendicectomy with the help of laprocator
Procedure Two Port Technique

Two port laparoscopic appendicectomy with the help of laprocator

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Appendicitis with Meckels Diverticulum
Complications

1. Bleeding
2. Visceral injury
3. Wound infection
4. Incomplete appendectomy
5. Intra-abdominal abscess
6. Hernia
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1. Bleeding
2. Visceral injury
3. Wound infection
4. Incomplete appendectomy
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6. Hernia
Advantages

1. Improved diagnosis
2. Reduced post-operative complication (pneumonia, Thromboembolism)
3.Less wound infection
4. Less chance of adhesions
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1. Reduced length of hospitalisation
2. Cosmetically better outcome
3. Reduced postoperative pain
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Disadvantages

- More expensive
- More operative time
- Potential for major complications in inexperienced hands
- Loss of tactile feedback
- Difficult in case of complicated appendicitis
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Thank You

Prof. Sir Alfred Cuschieri with R.K.Mishra at Ninewells Hospital, U.K.