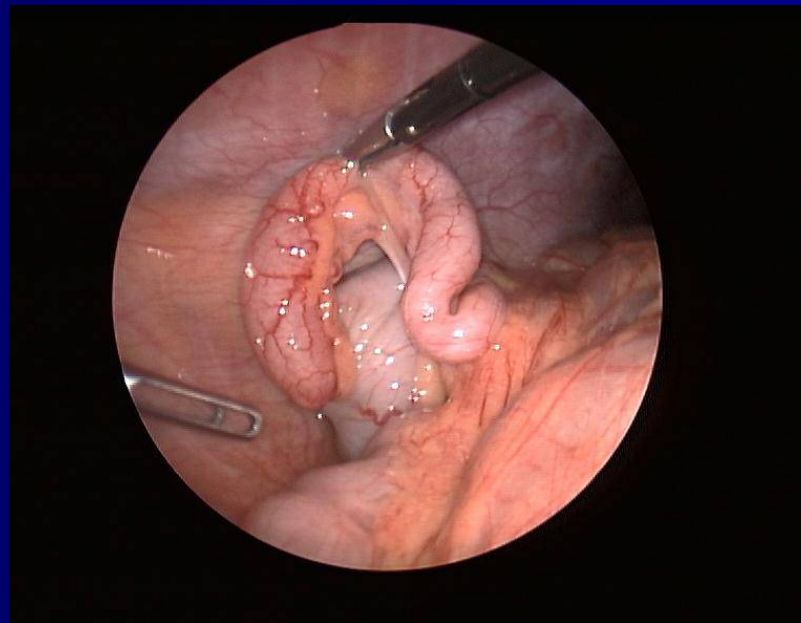


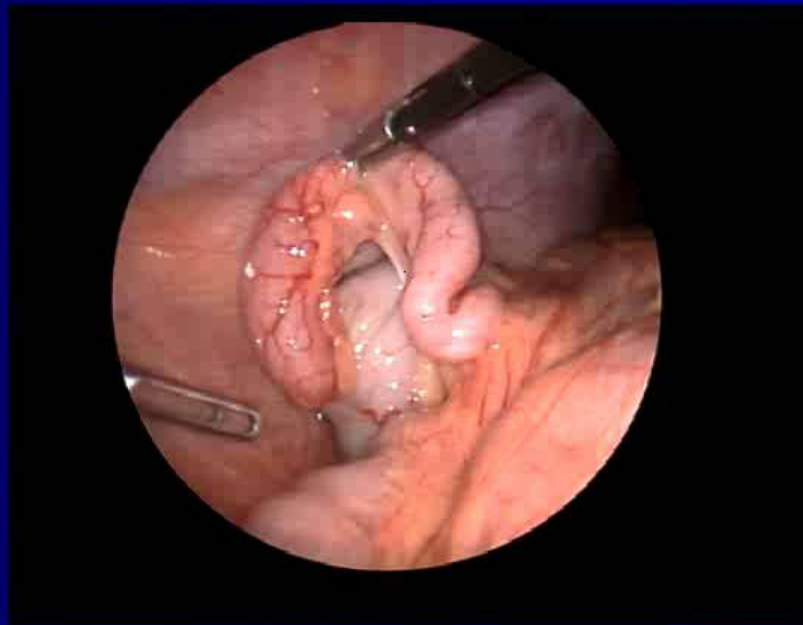
Laparoscopic Appendicectomy



R. K. Mishra



Laparoscopic Appendicectomy



R. K. Mishra



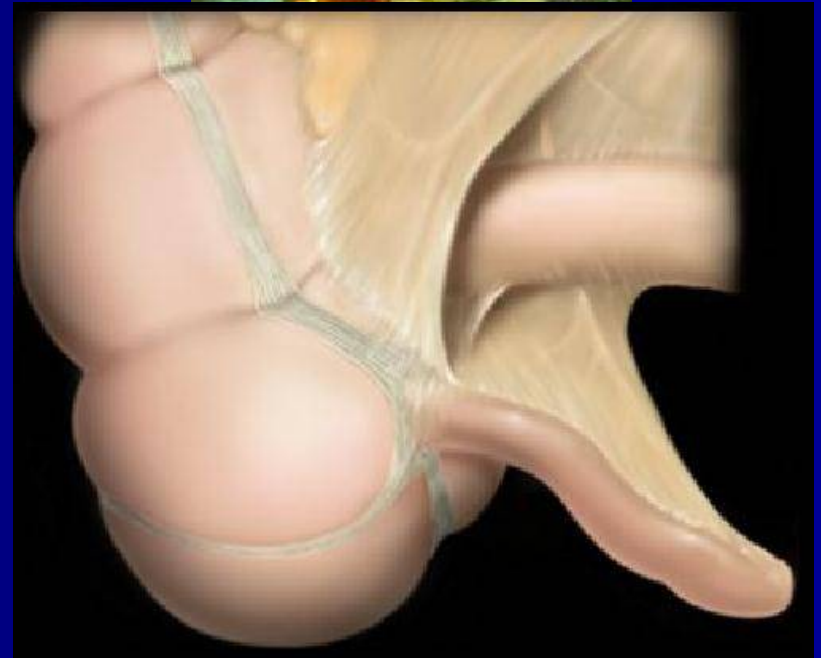
Laparoscopy Hospital, New Delhi

Essentials of Laparoscopic Surgery



Indications

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



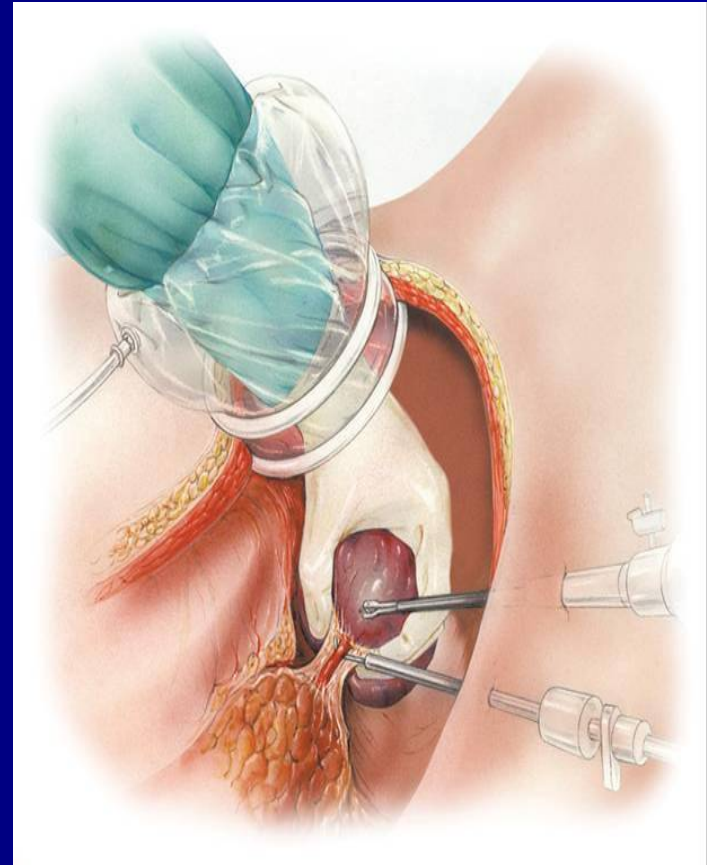
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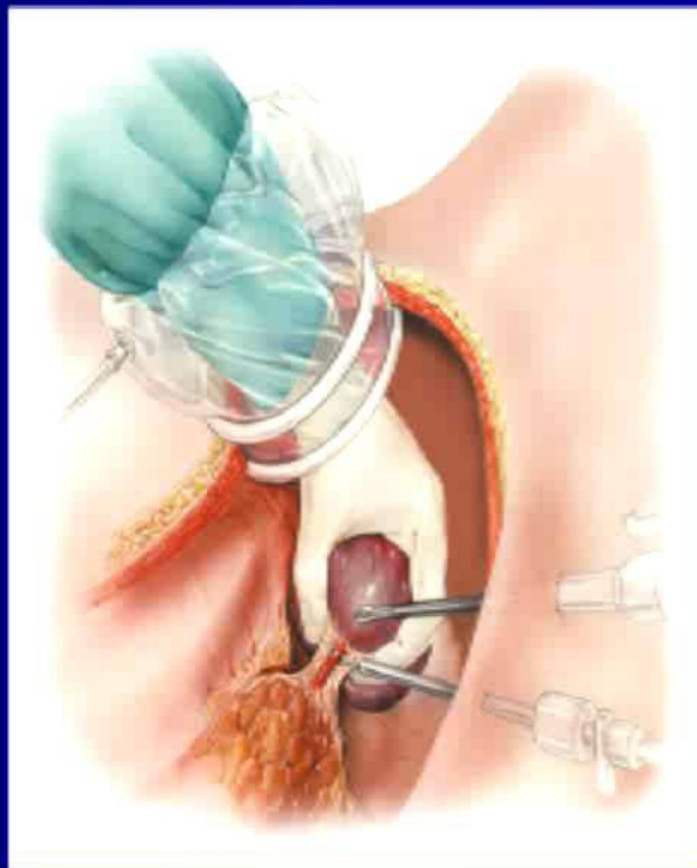
Contraindications

- 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

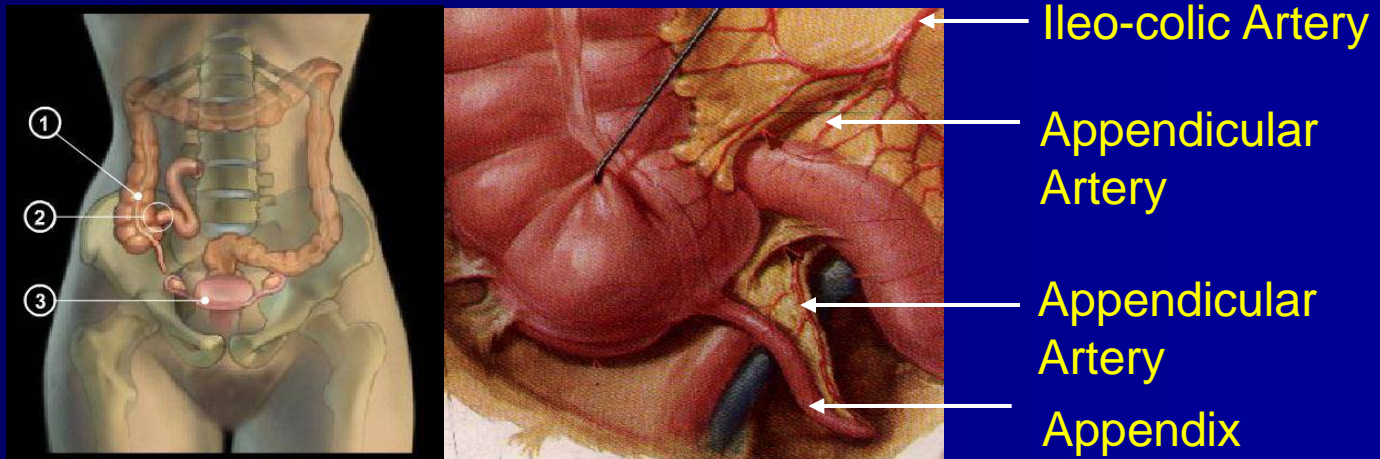


Contraindications

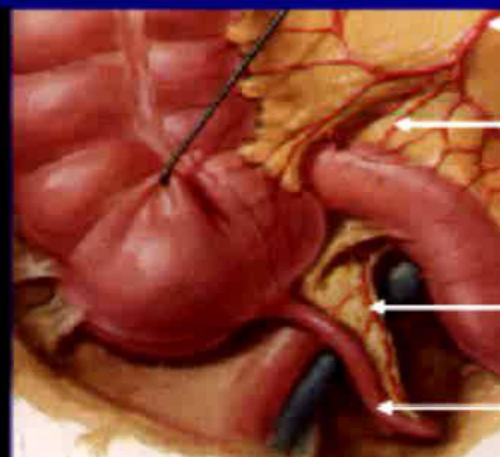
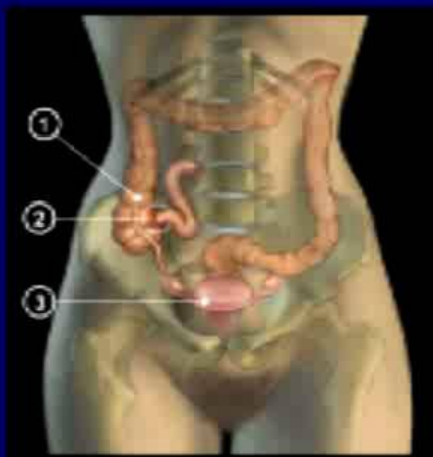
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Surgical Anatomy



Surgical Anatomy



Ileo-colic Artery

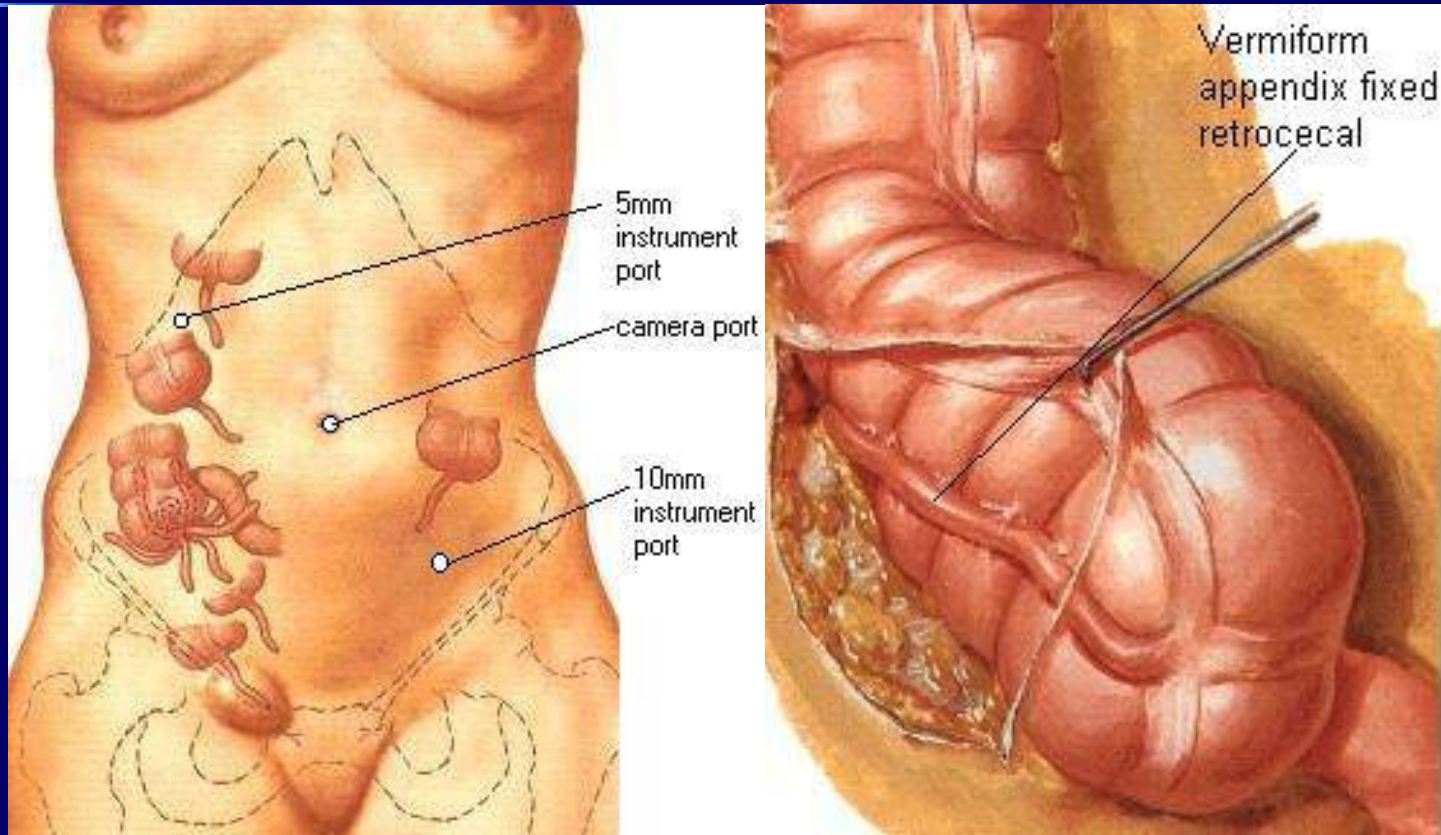
Appendicular Artery

Appendicular Artery

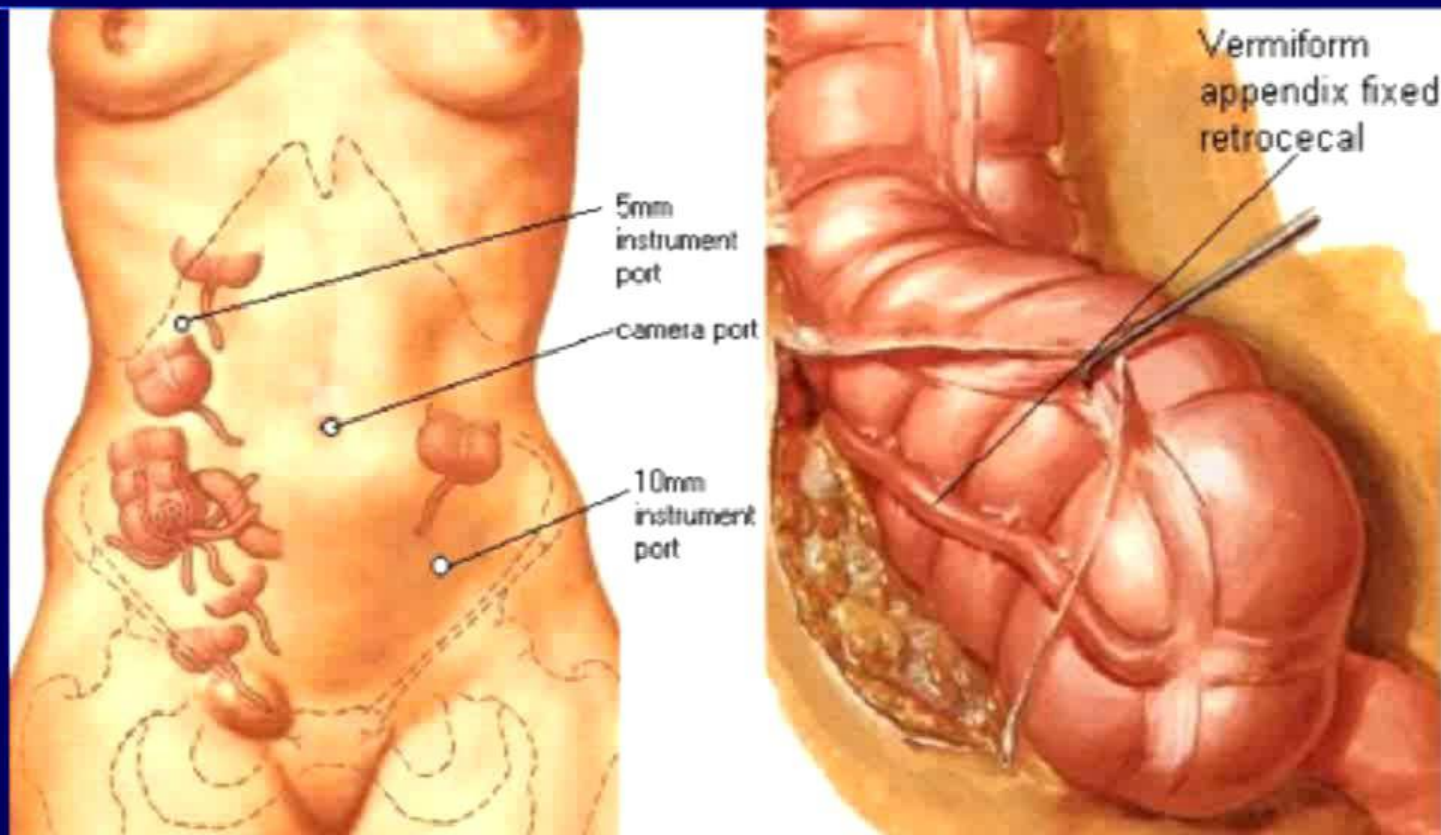
Appendix



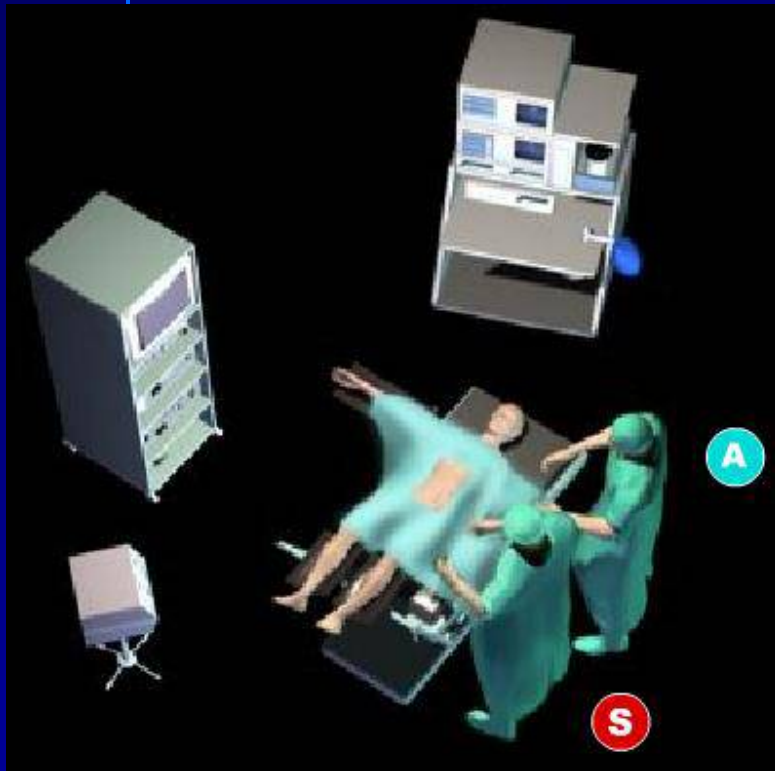
Surgical anatomy



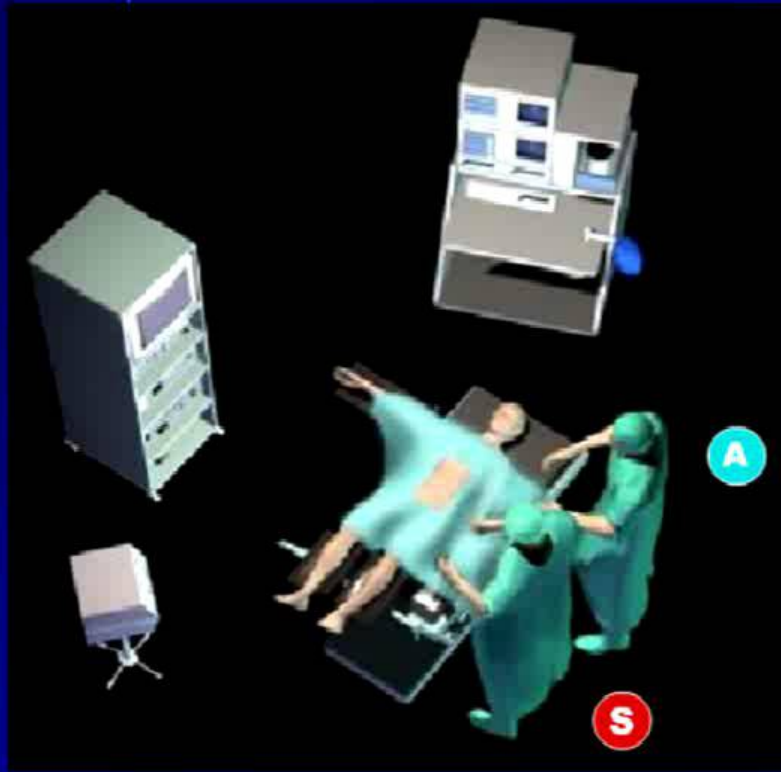
Surgical anatomy



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



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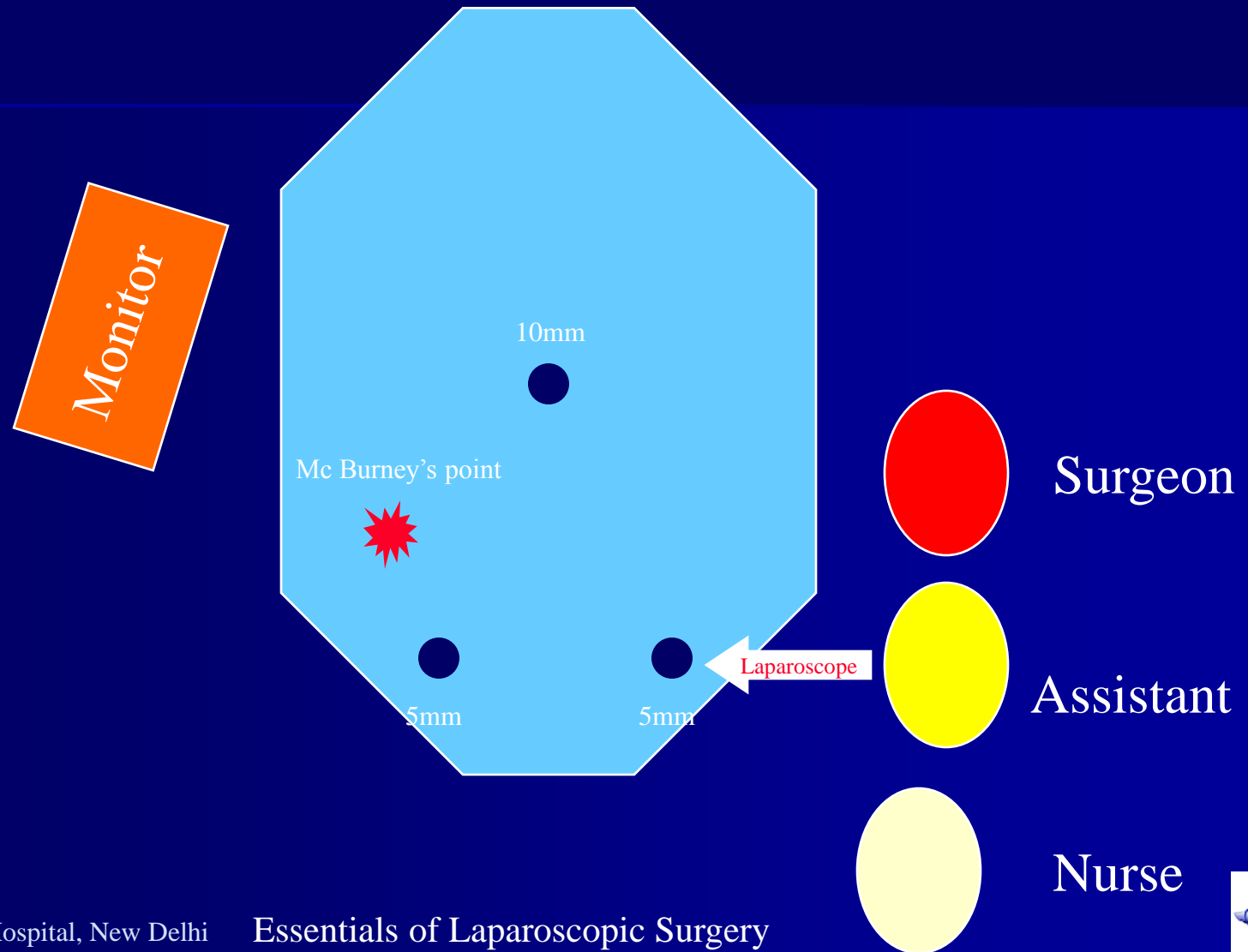
Laparoscopic Appendicectomy



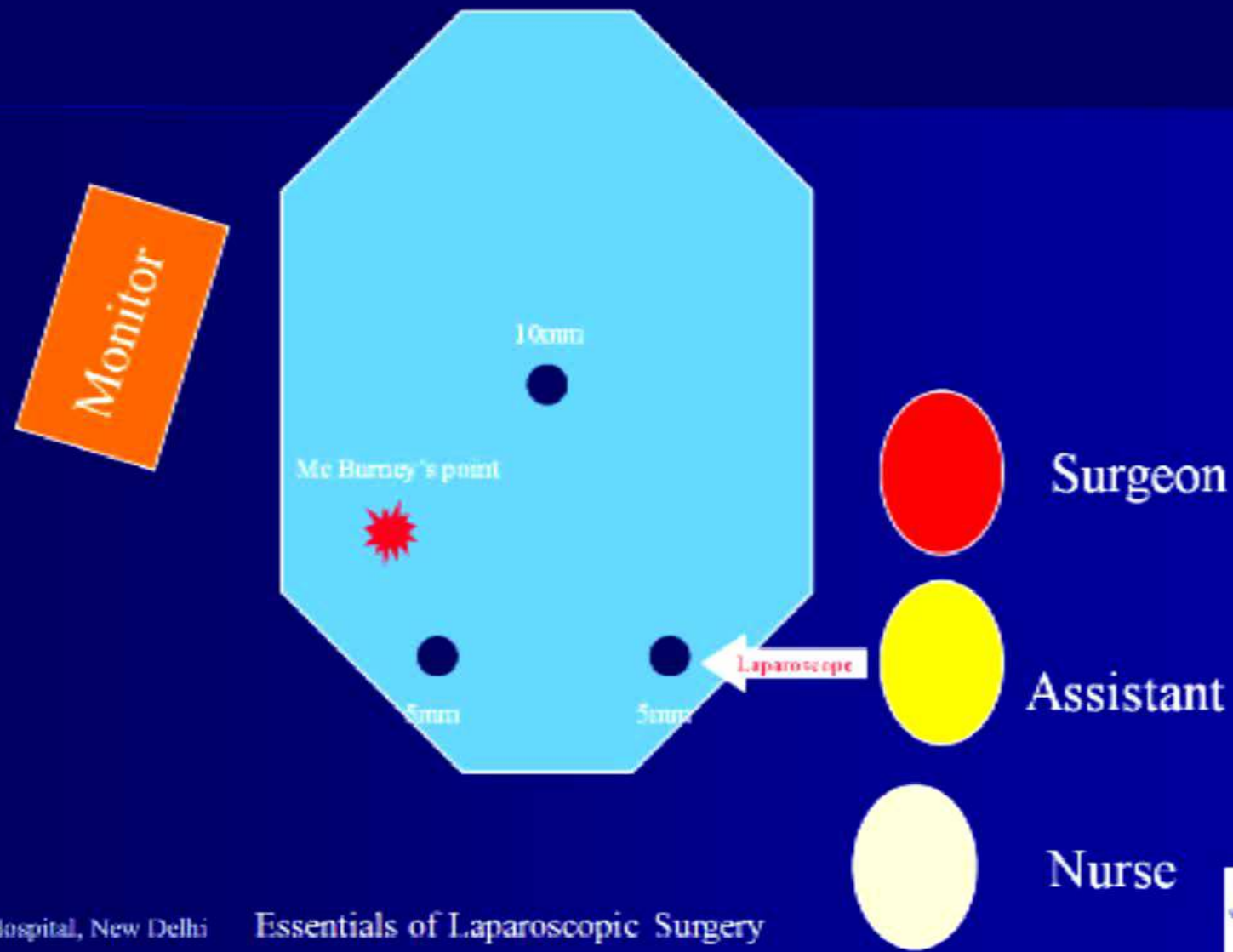
Laparoscopic Appendicectomy



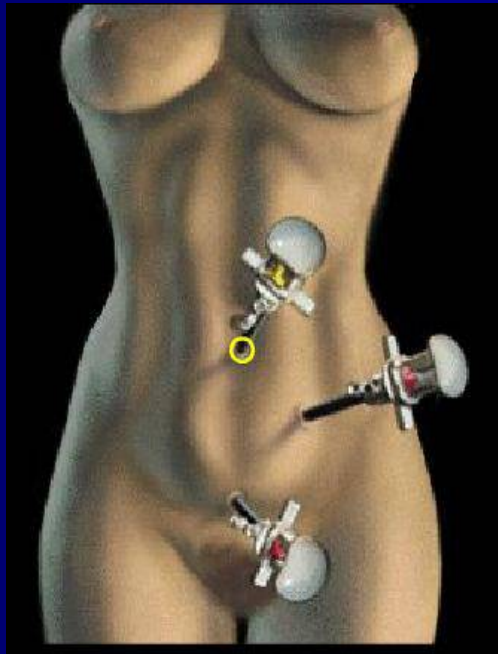
Alternative Port Position



Alternative Port Position



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



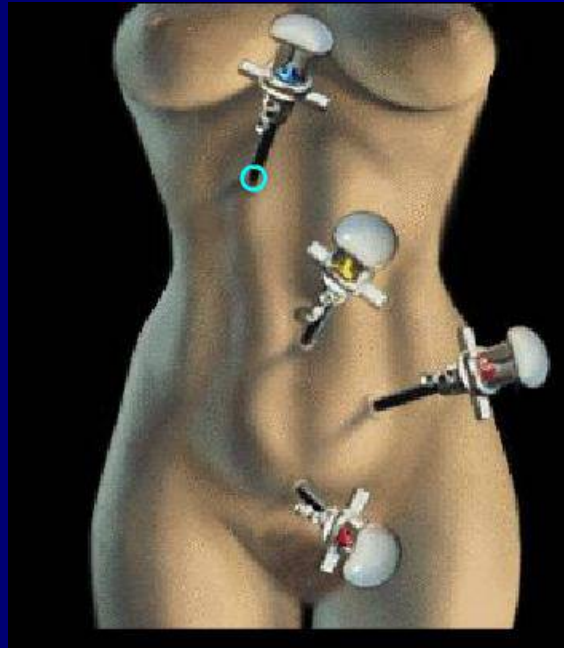
Danger of Alternative Port Position



If suprapubic port is used bladder should be taken care of



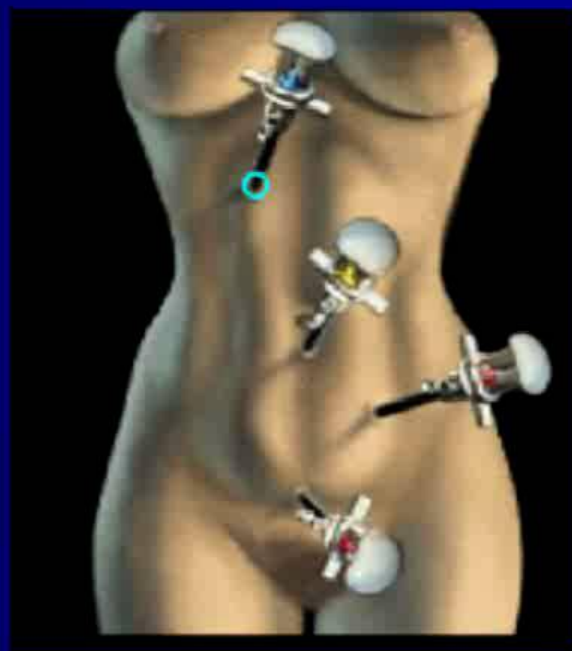
Port Position in Difficult Exposure



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.



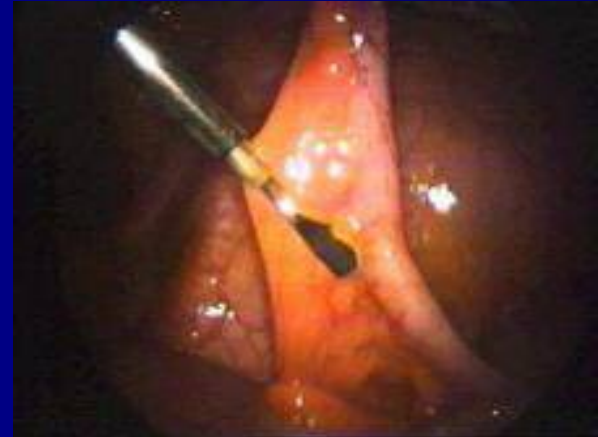
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Procedure

- Create a mesenteric window of 1cm 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



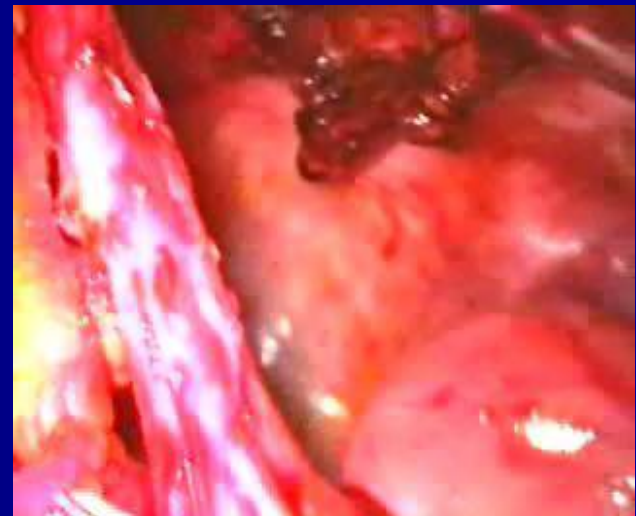
Procedure

- Create a mesenteric window of 1cm size behind the base of the appendix as close as possible to the base of the 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.

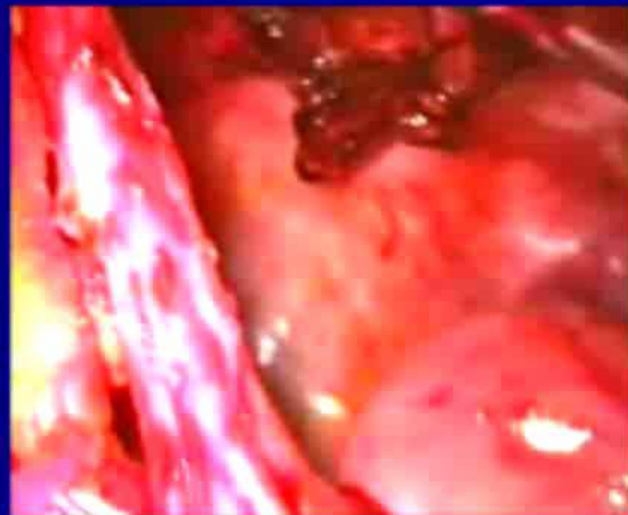


Video demonstration of extracorporeal knot



Procedure

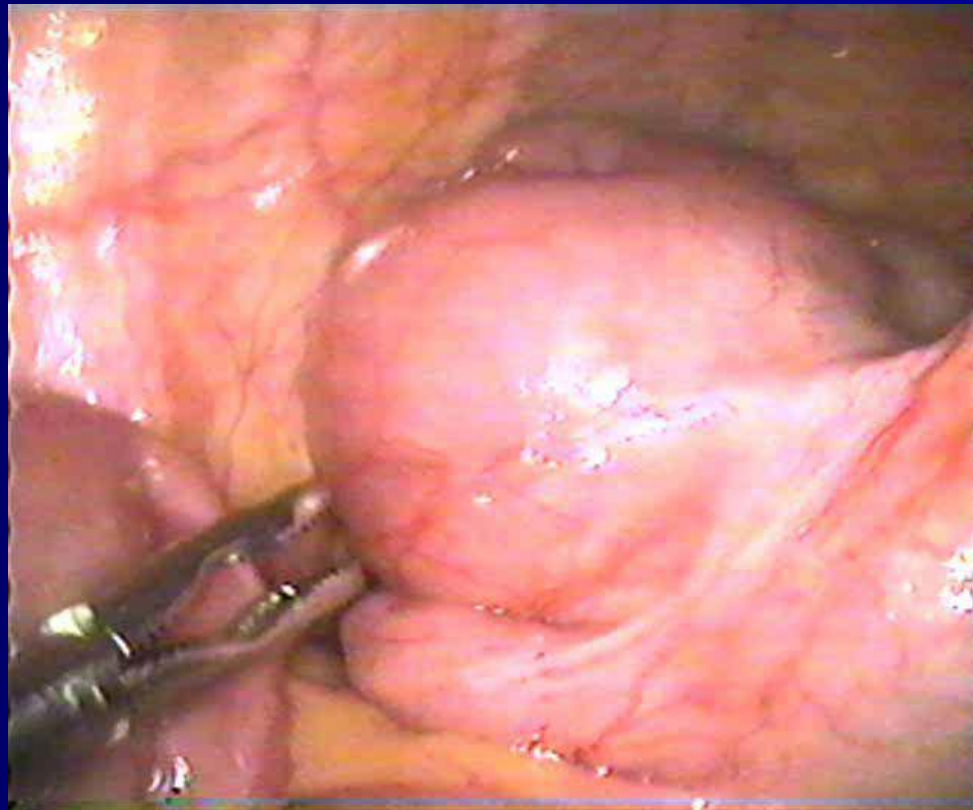
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Video demonstration of extracorporeal knot



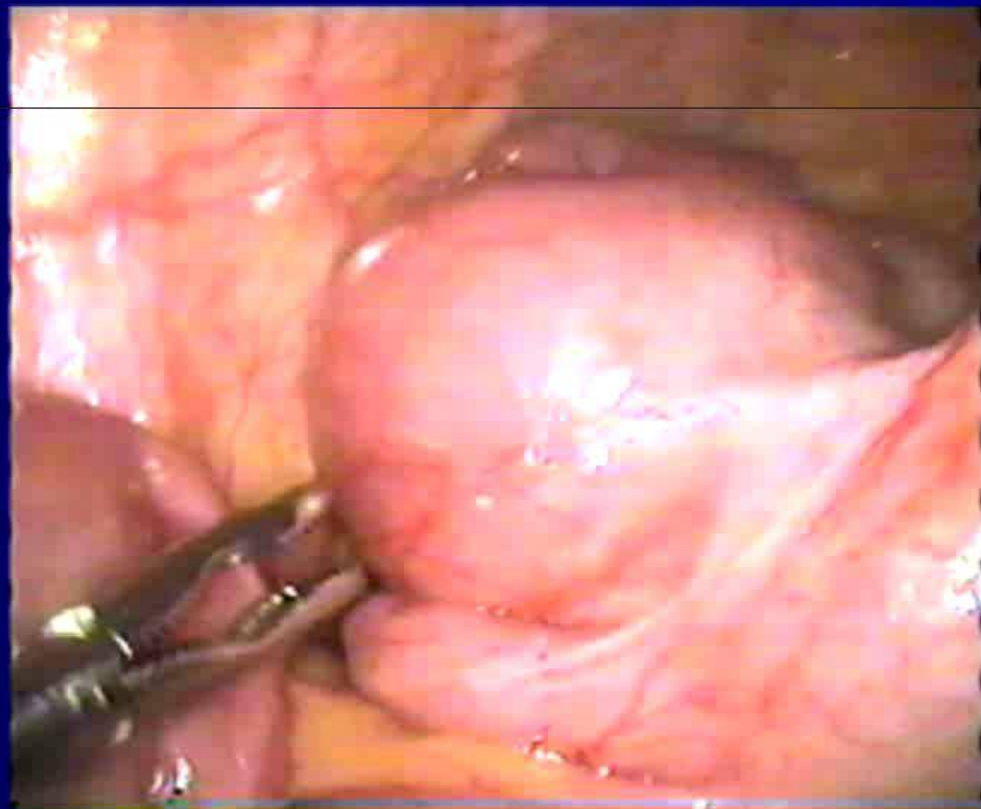
Procedure



Video demonstration of laparoscopic appendicectomy



Procedure



Video demonstration of laparoscopic appendicectomy



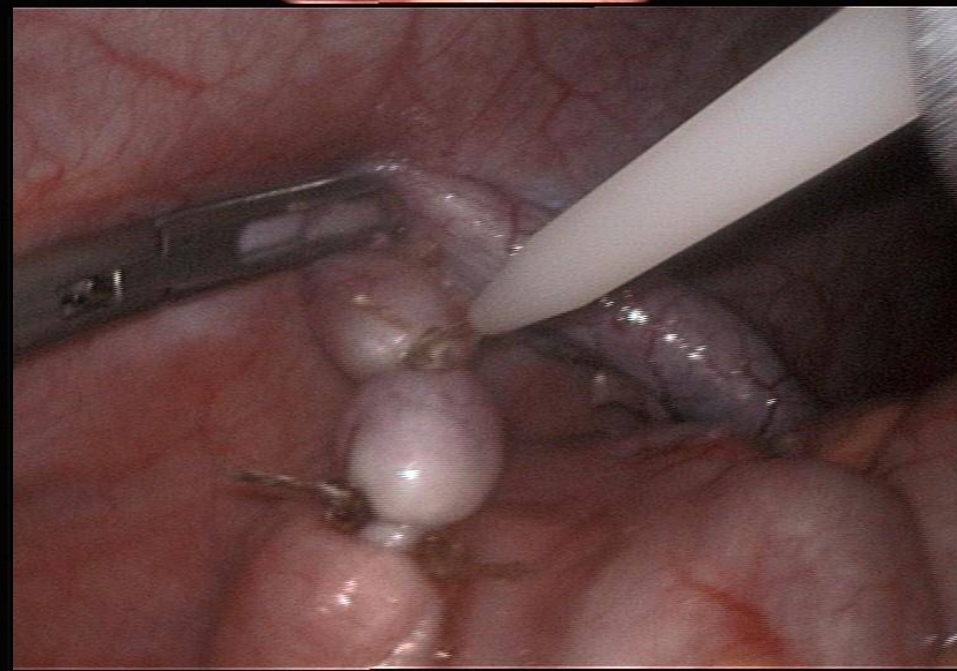
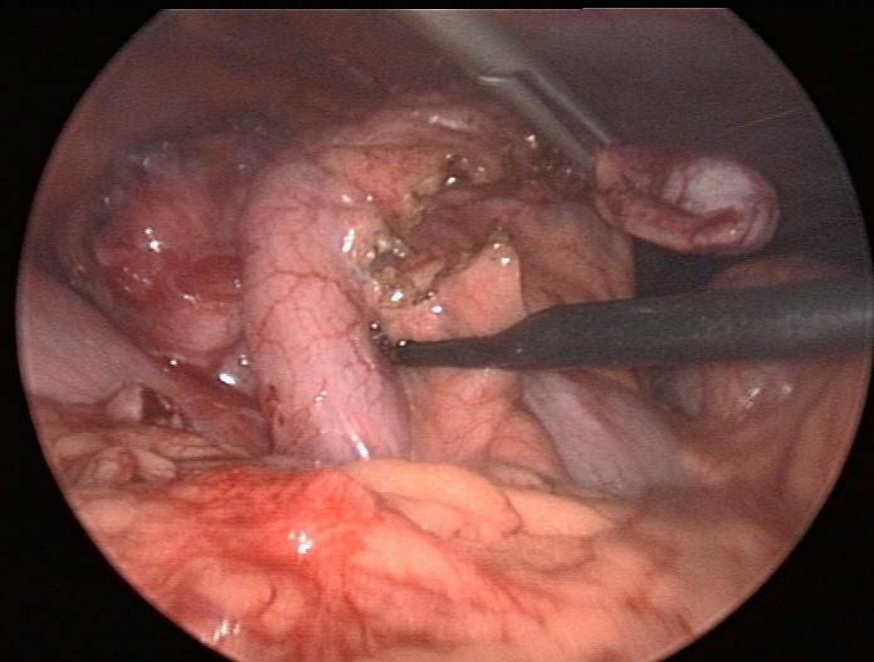
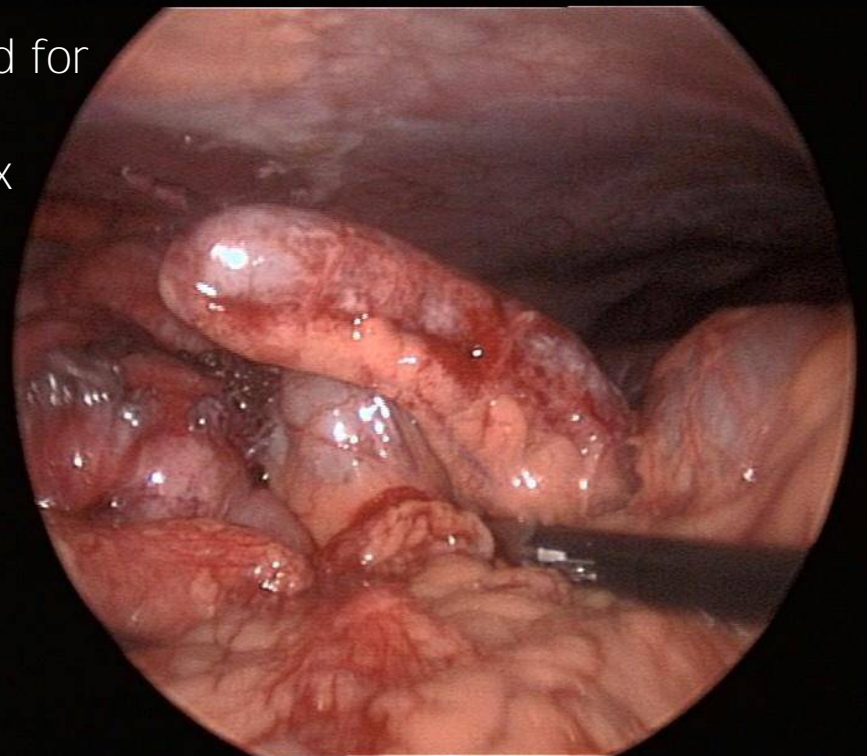
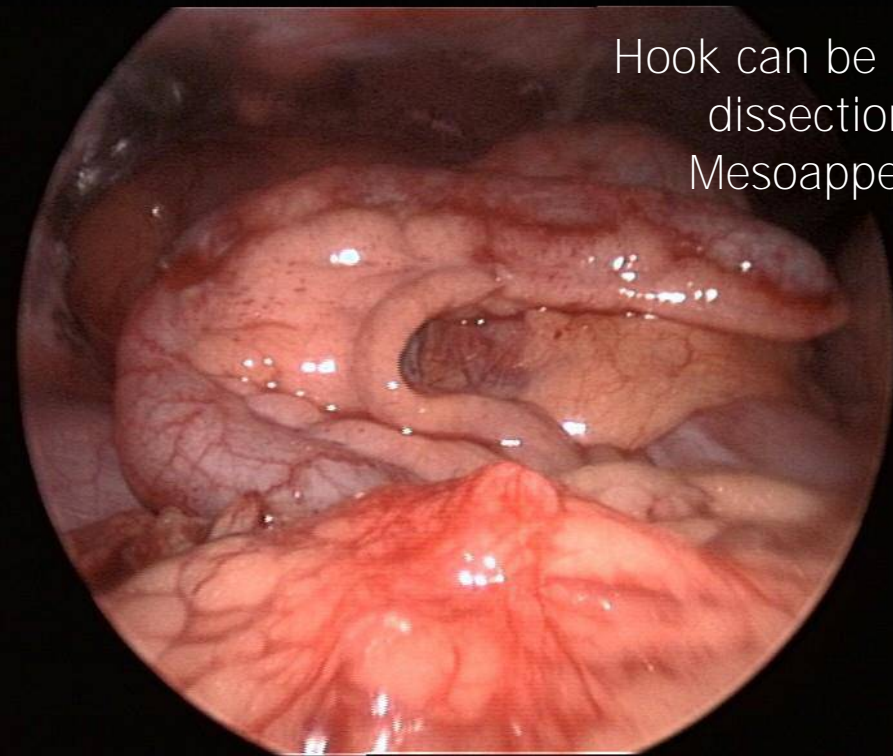
Ligasure



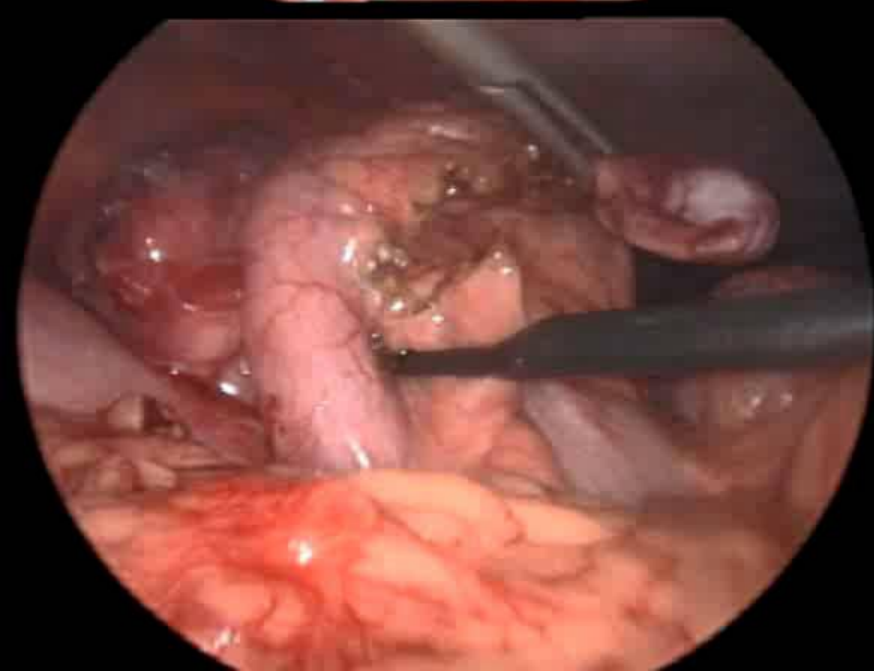
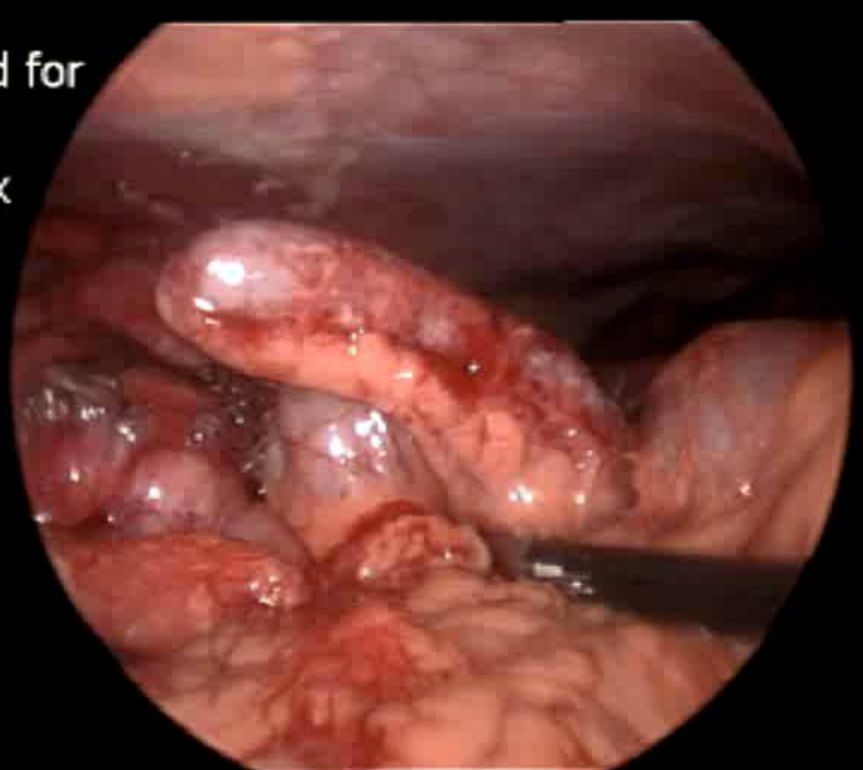
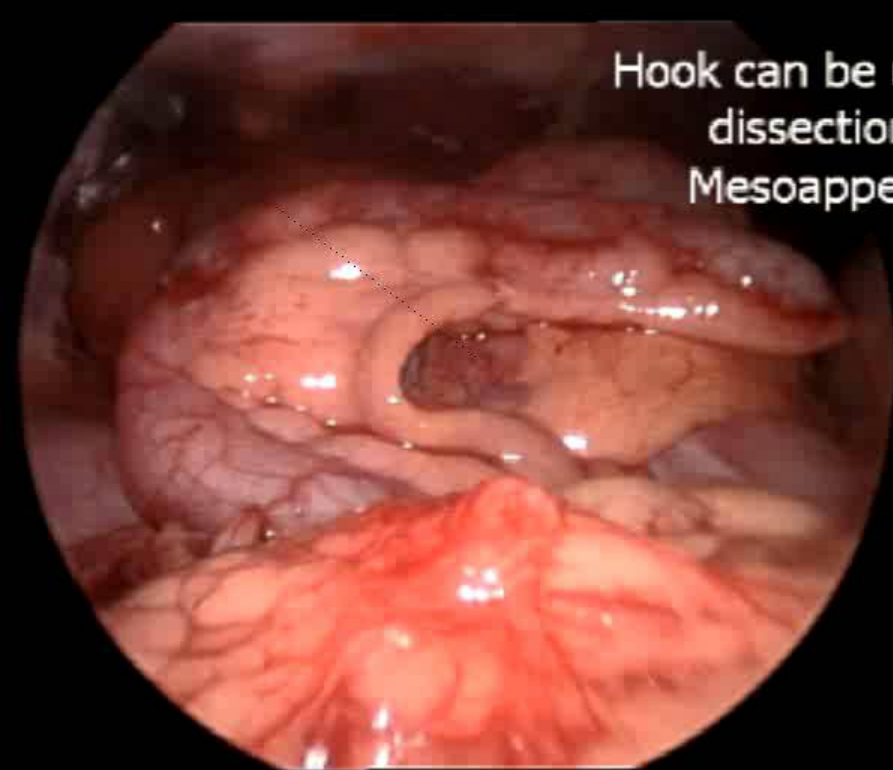
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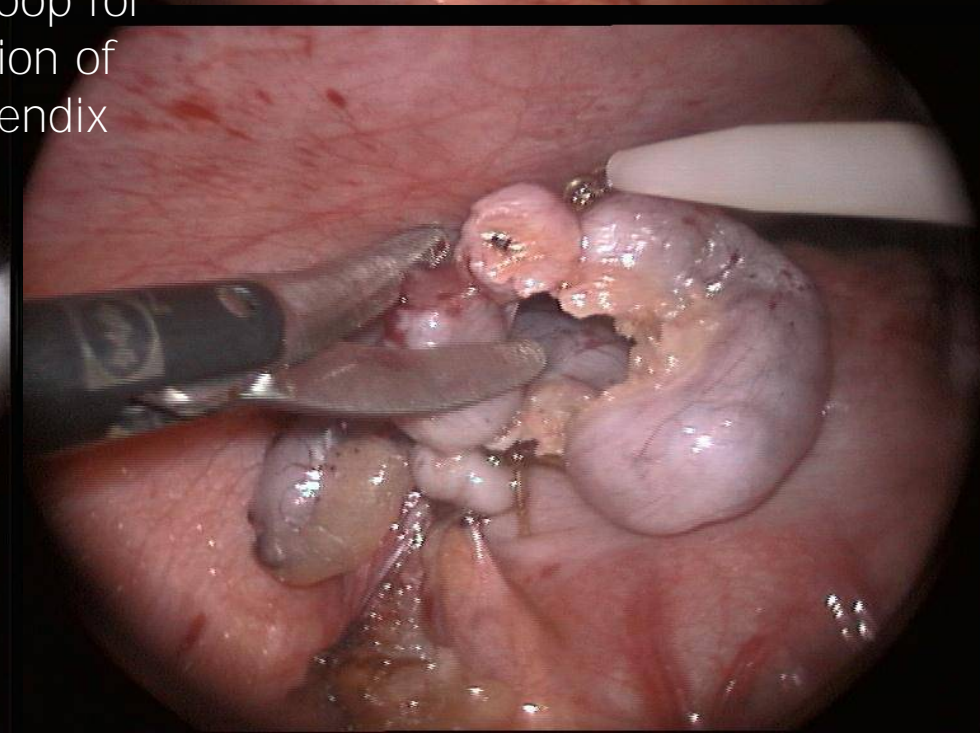
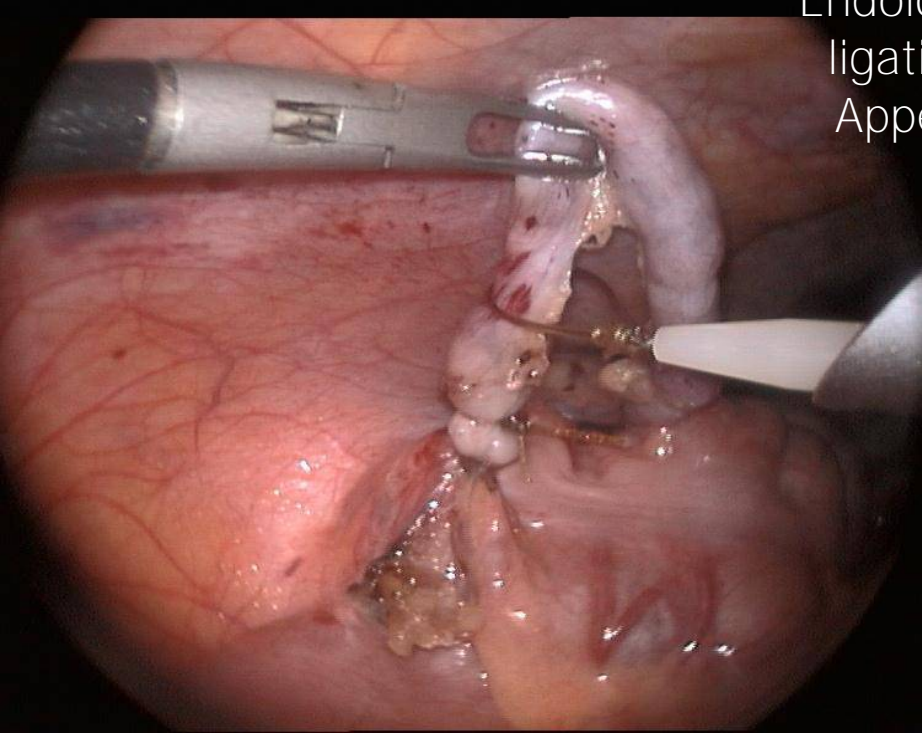
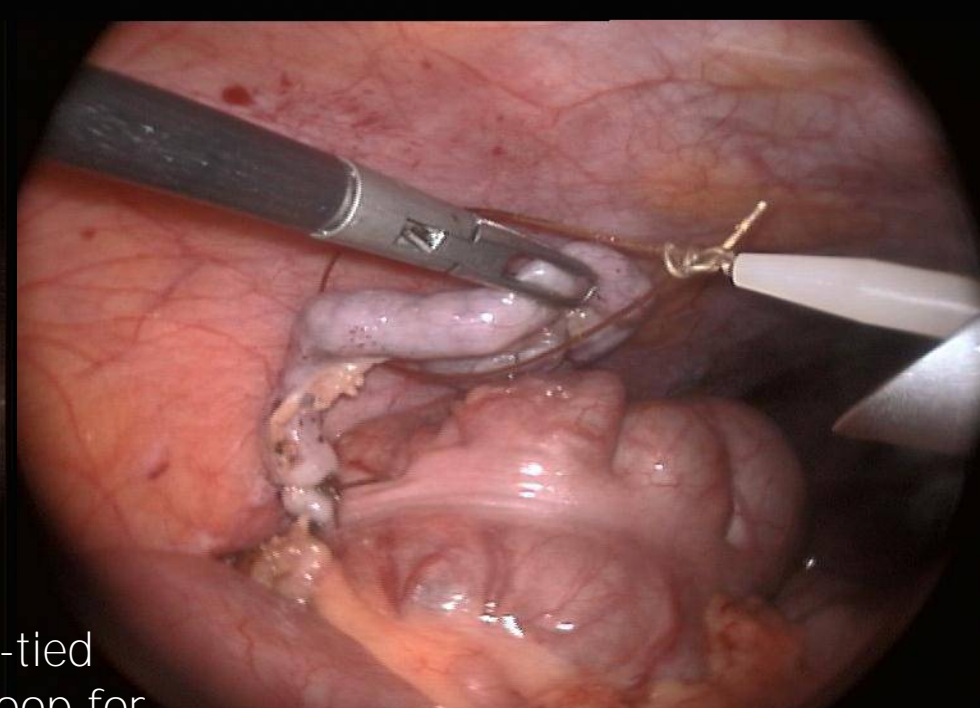
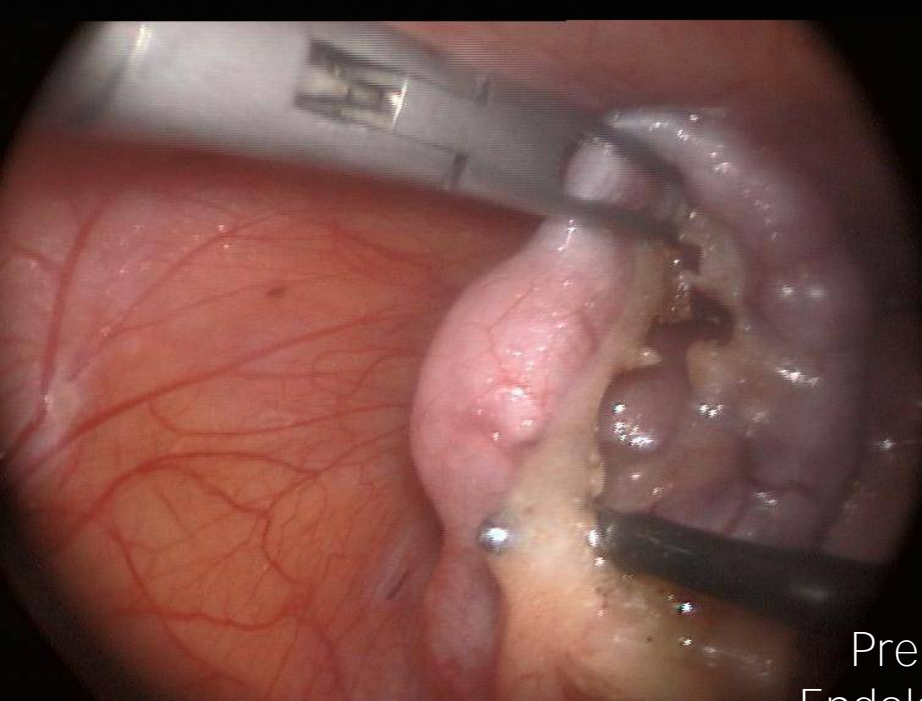


Hook can be used for
dissection of
Mesoappendix

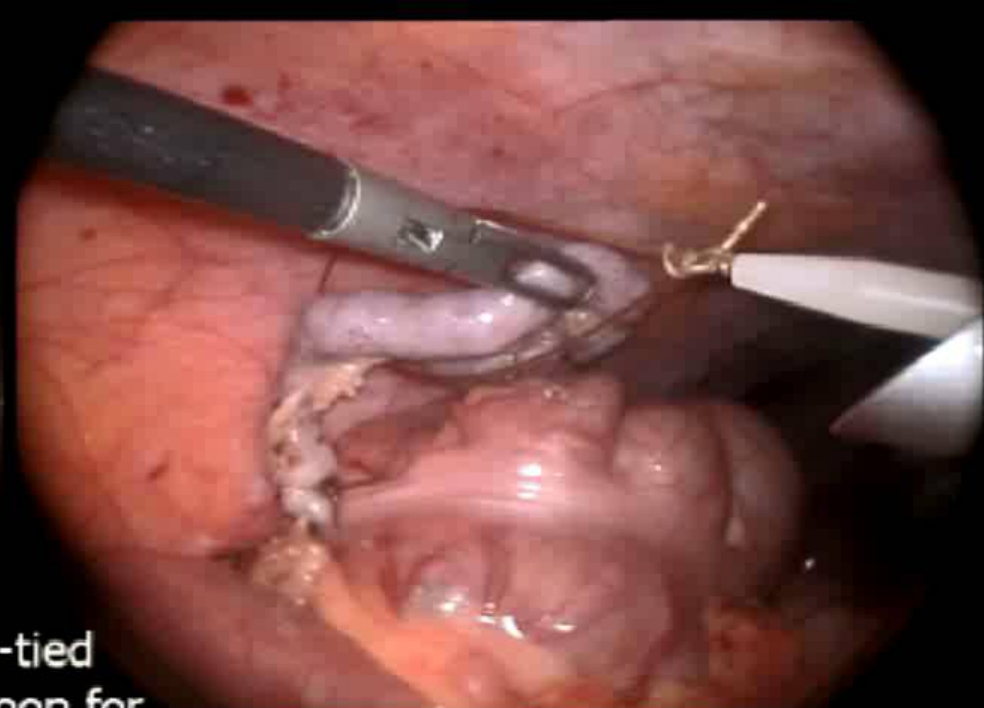


Hook can be used for
dissection of
Mesoappendix





Pre-tied
Endoloop for
ligation of
Appendix



Pre-tied
Endoloop for
ligation of
Appendix



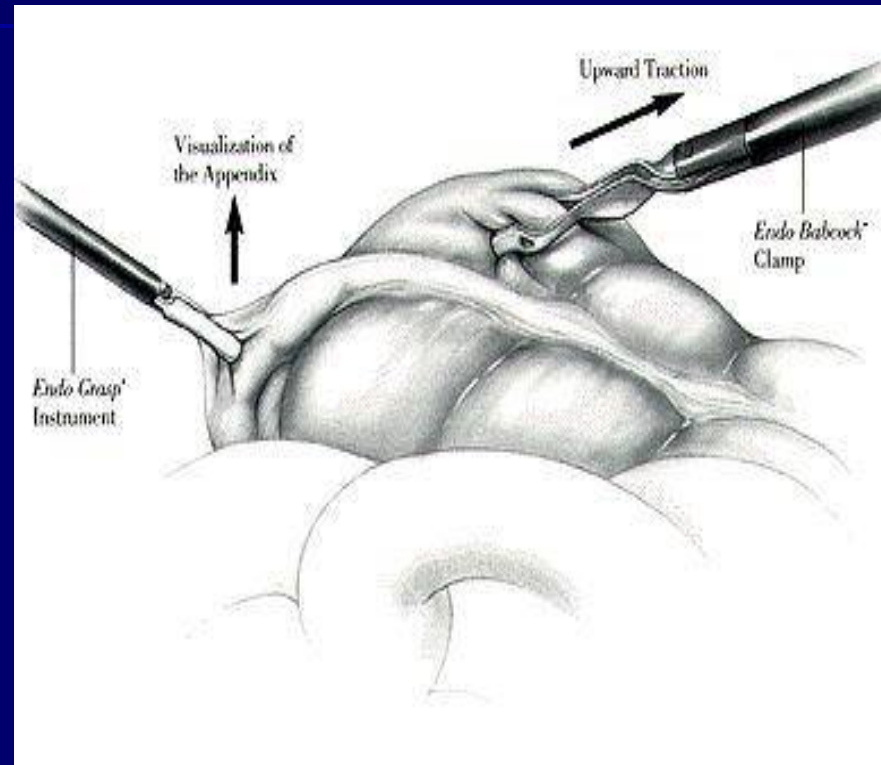
Tying roaders knot over finger of assistant



Tying roaders knot over finger of assistant



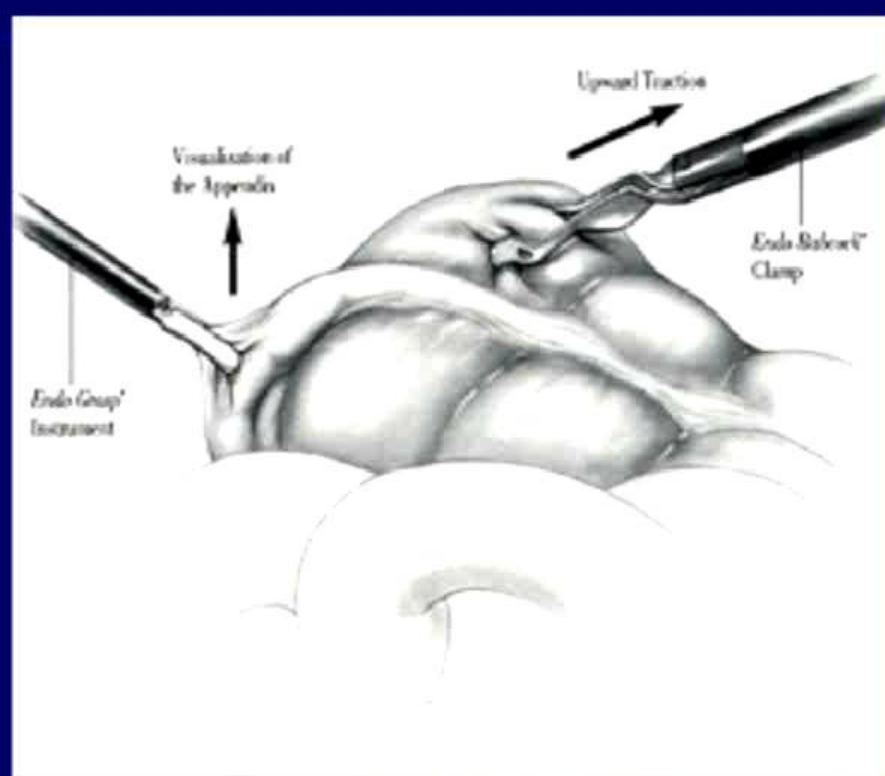
Stapler Appendectomy



Appendix is held by grasper



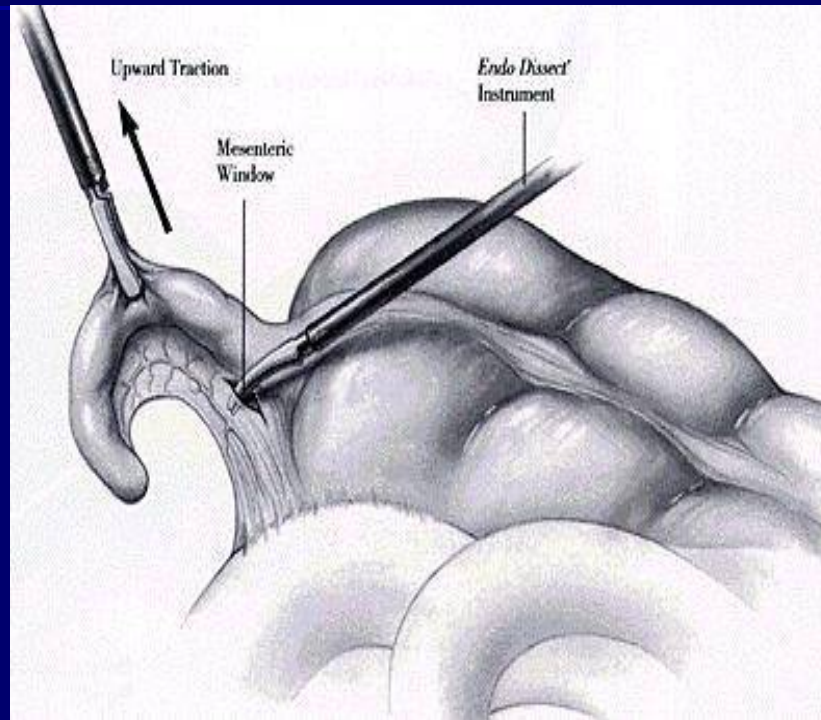
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Appendix is held by grasper



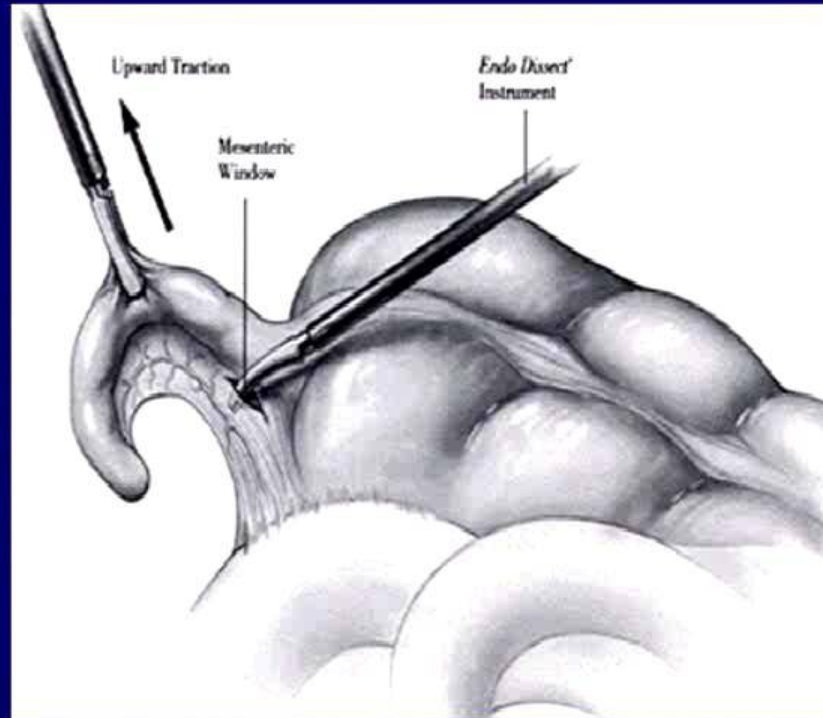
Stapler Appendectomy



A window is created in mesoappendix



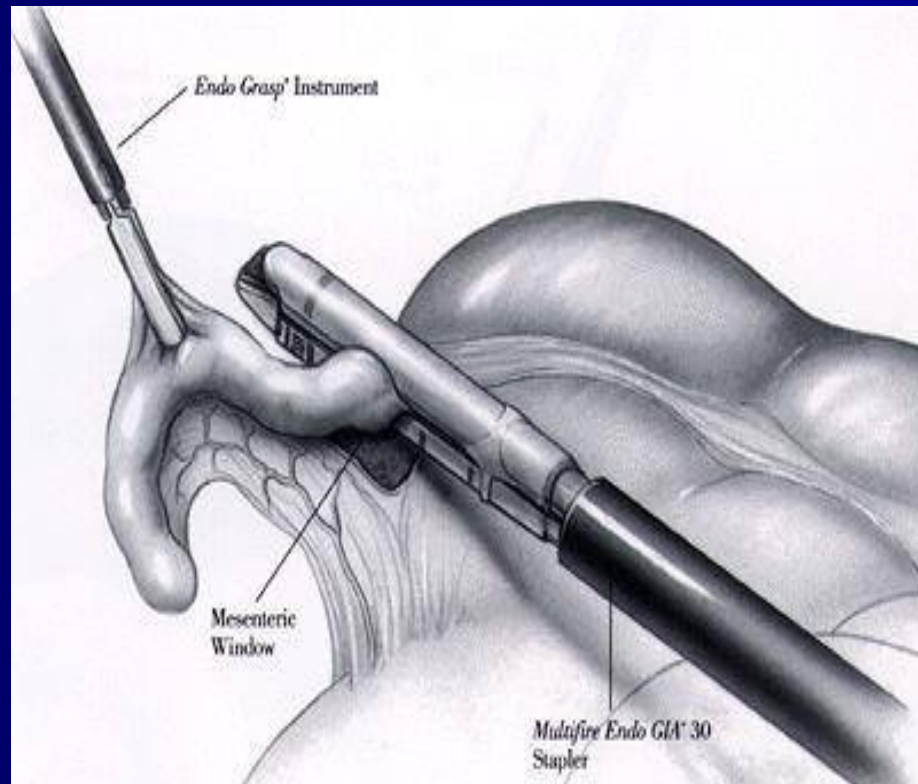
Stapler Appendectomy



A window is created in mesoappendix



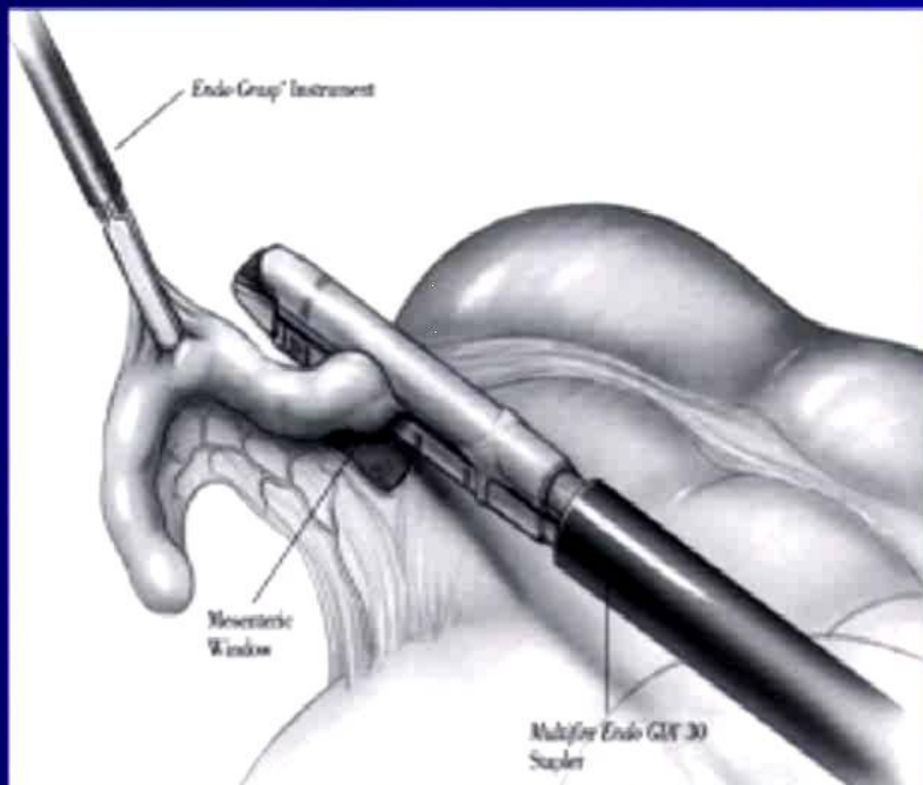
Stapler Appendectomy



Linear stapler is used to dissect appendix



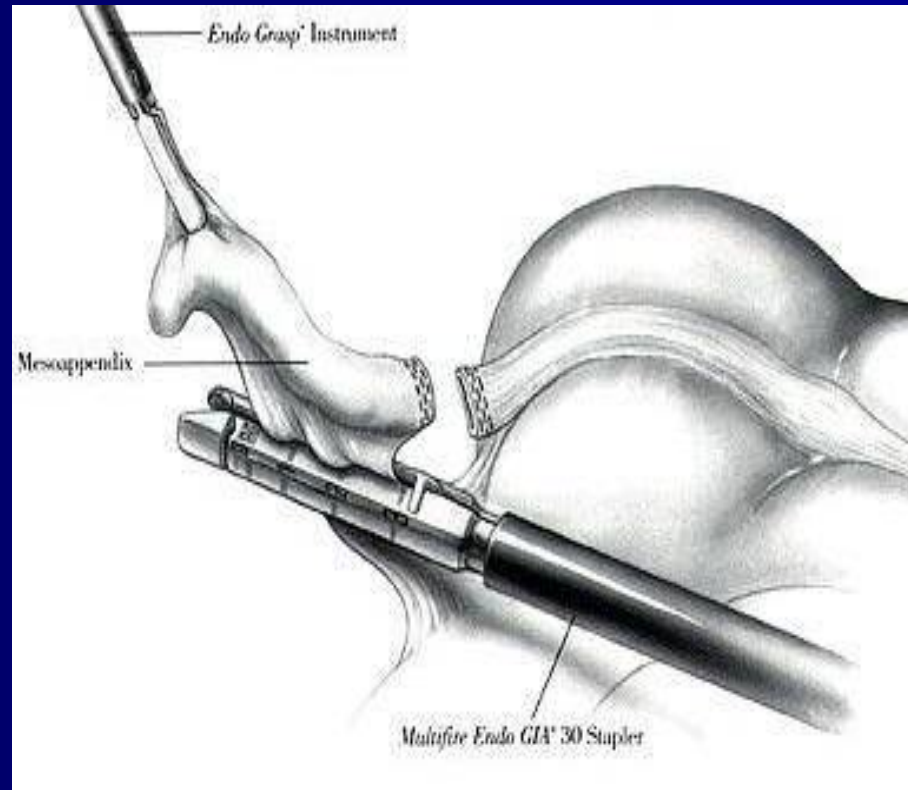
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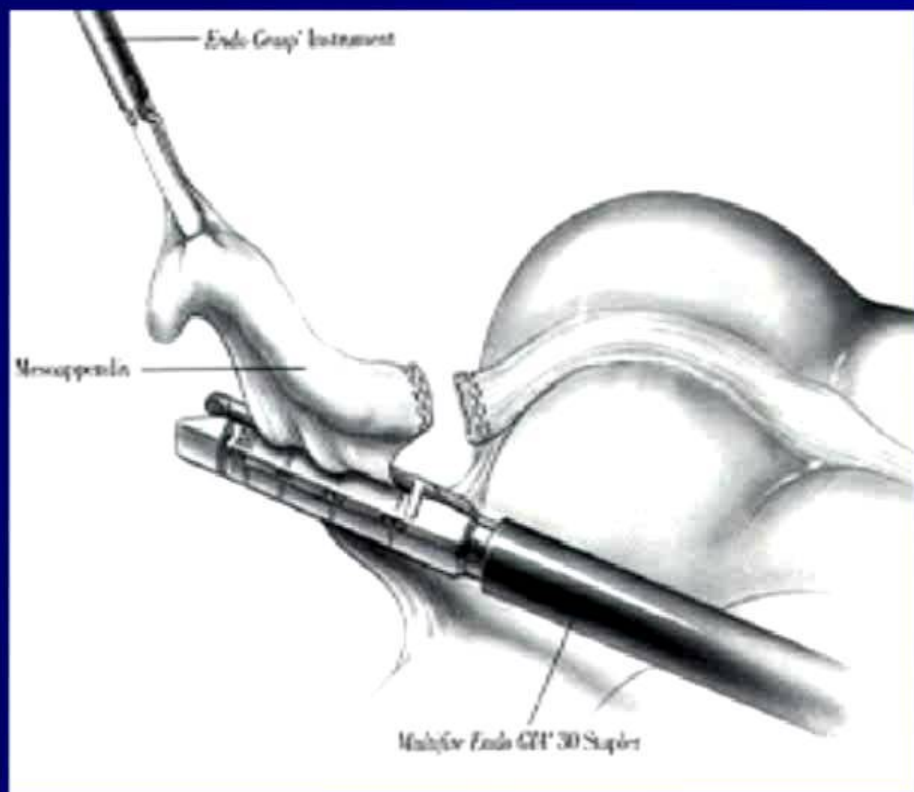
Stapler Appendectomy



Linear stapler is used to dissect mesoappendix



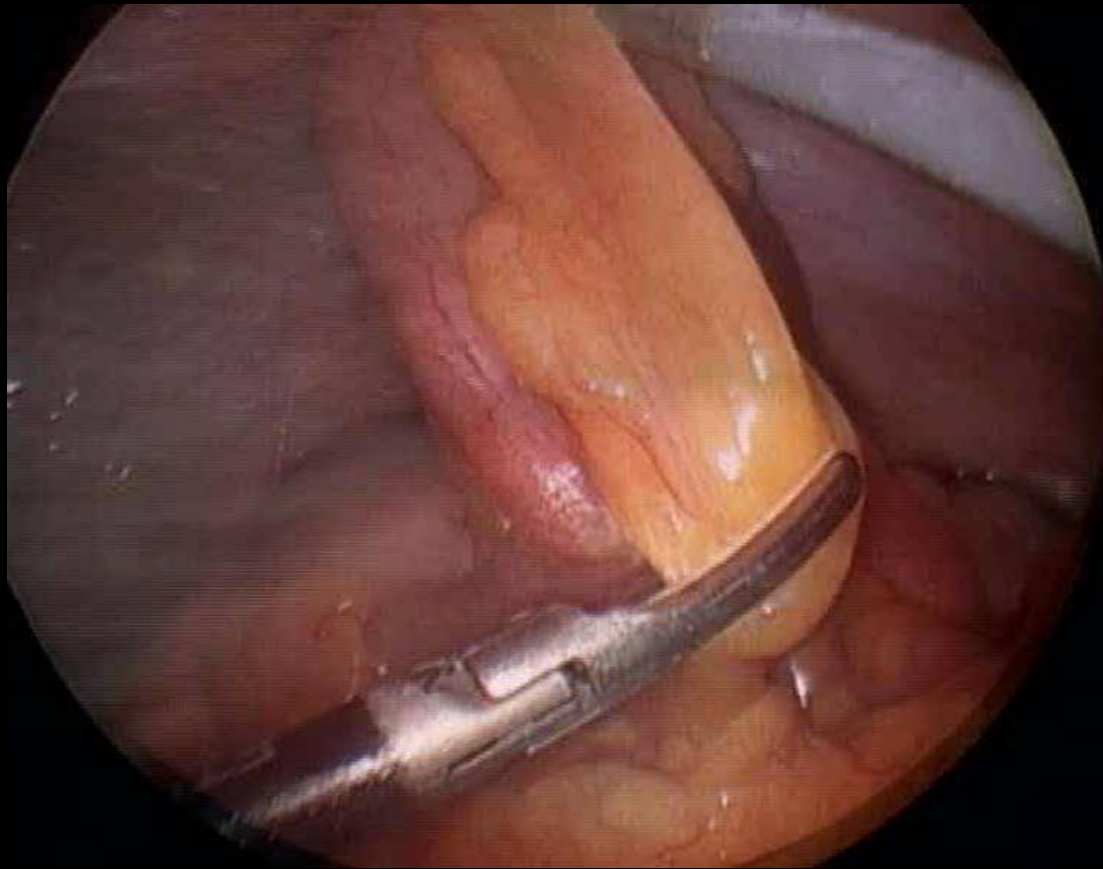
Stapler Appendectomy



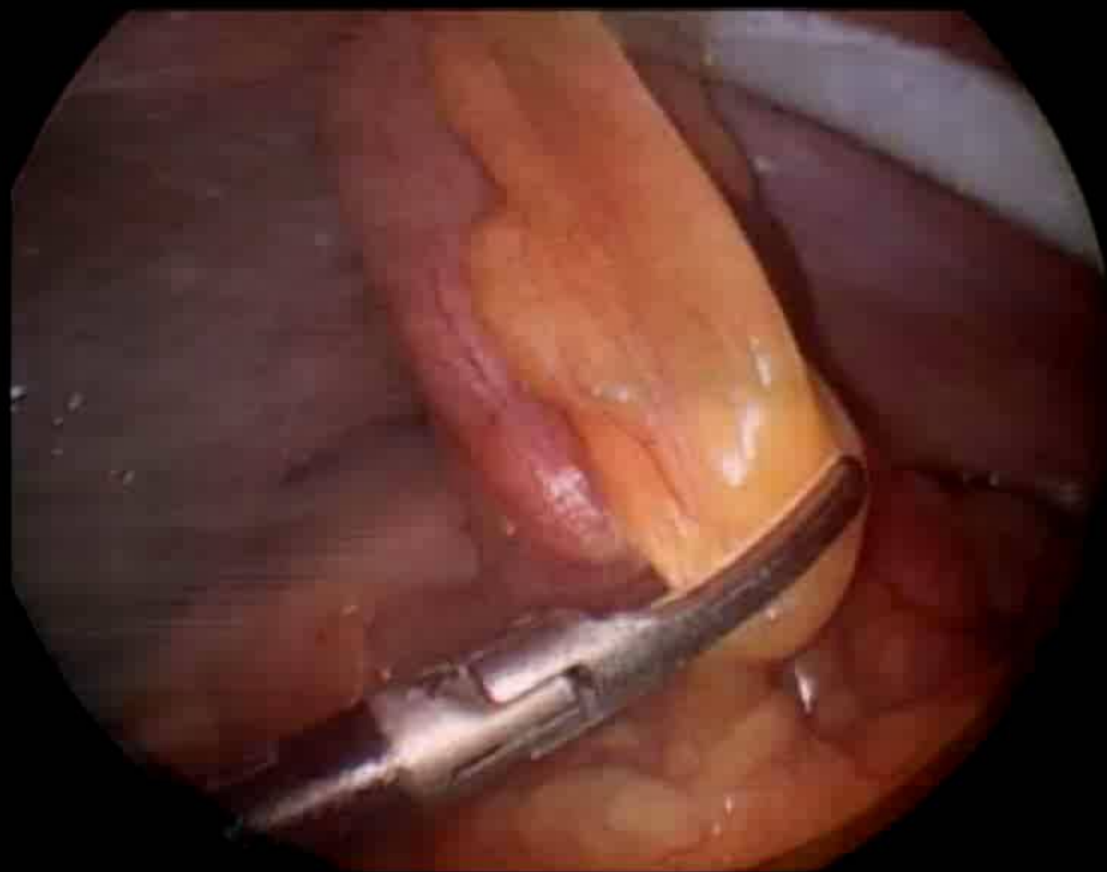
Linear stapler is used to dissect mesoappendix



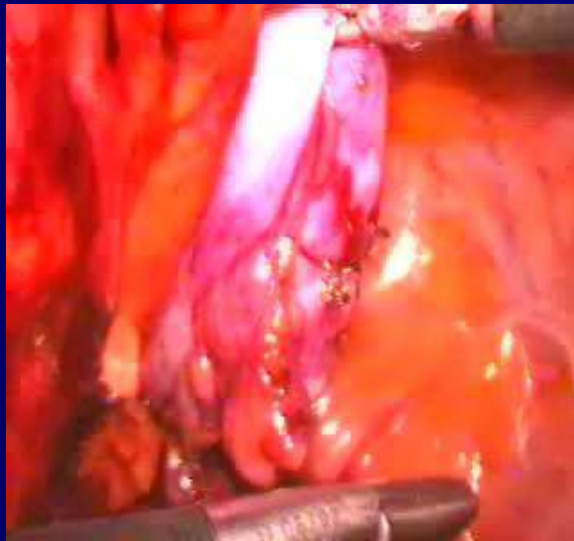
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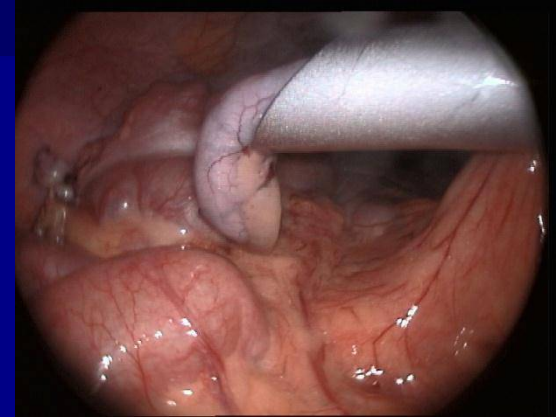
Stapler Appendectomy



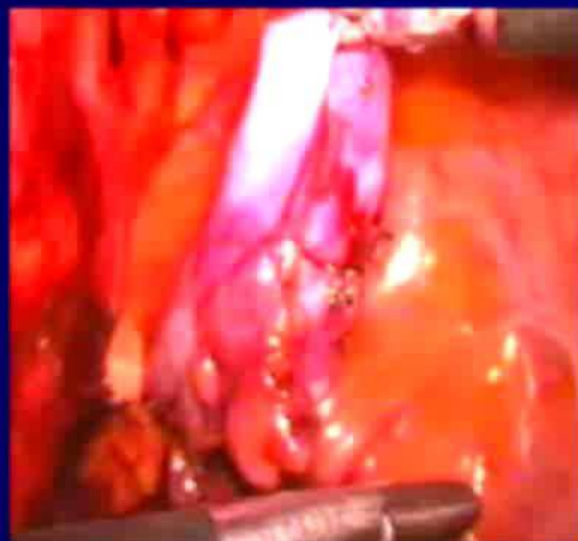
Taking the appendix out



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



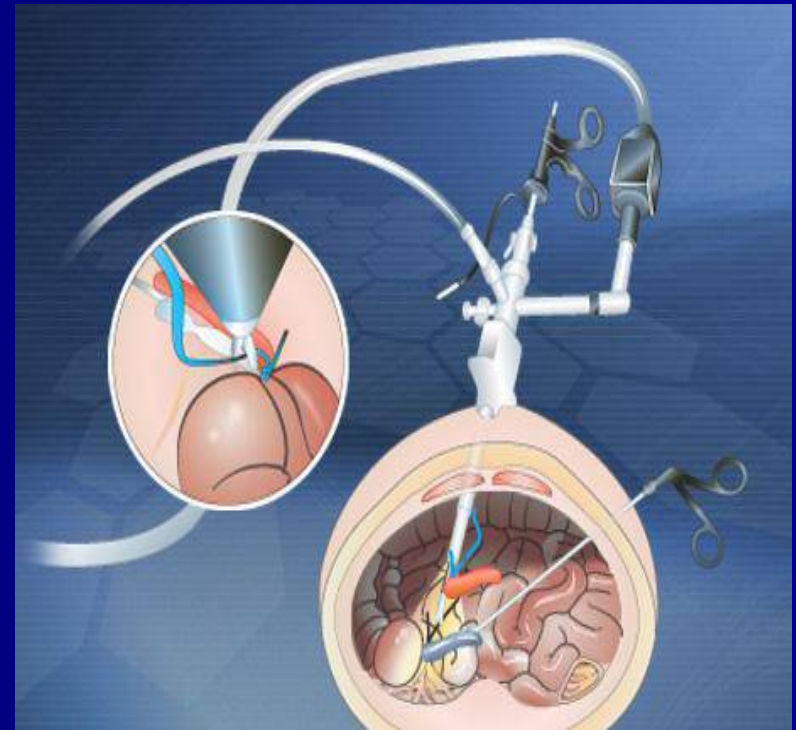
Retrocecal Appendix



Video showing laparoscopic removal of retrocecal appendix



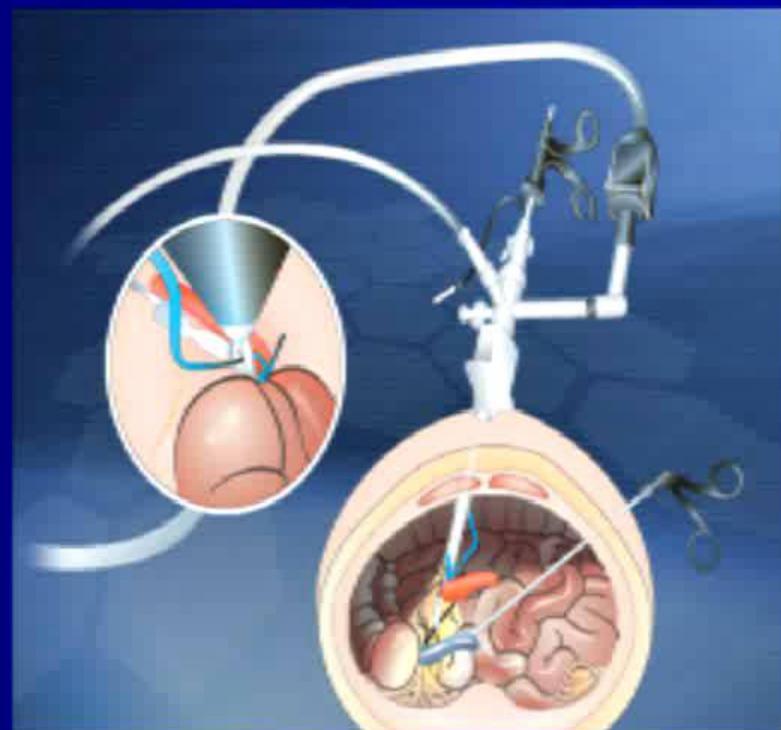
Procedure Two Port Technique



Two port laparoscopic appendicectomy with the help of laprograsper



Procedure Two Port Technique



Two port laparoscopic appendicectomy with the help of laprograsper



Appendicitis with Meckels Diverticulum

12/07/2006



Appendicitis with Meckels Diverticulum

12/07/2006



Complications

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



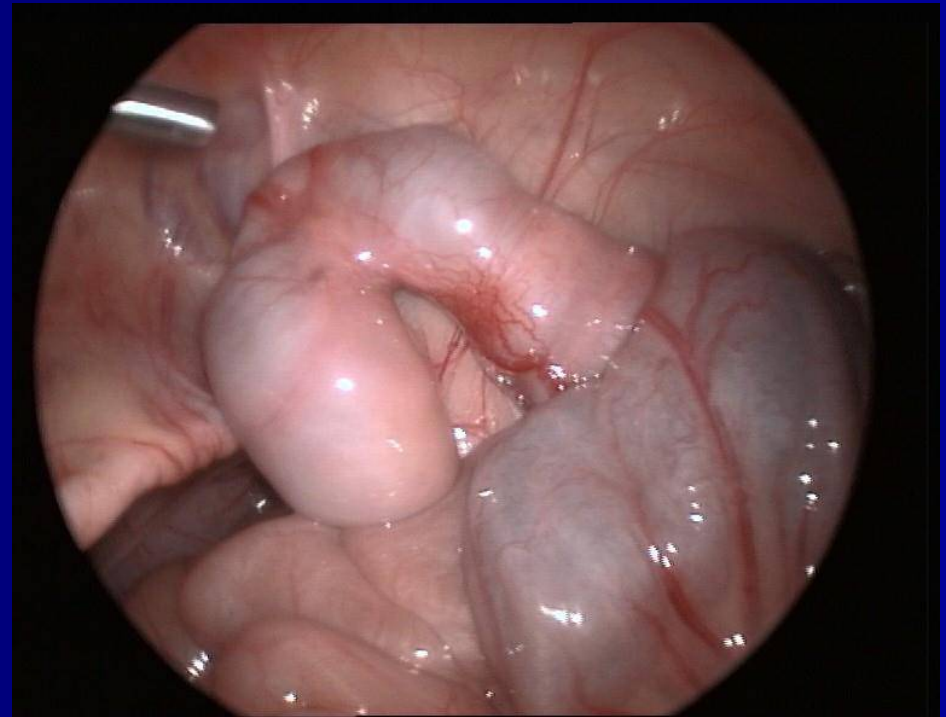
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Advantages

1. Improved diagnosis
2. Reduced post-operative complication (pneumonia, Thromboembolism)
3. Less wound infection
4. Less chance of adhesions



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Advantages

1. Reduced length of hospitalisation
2. Cosmetically better outcome
3. Reduced postoperative pain



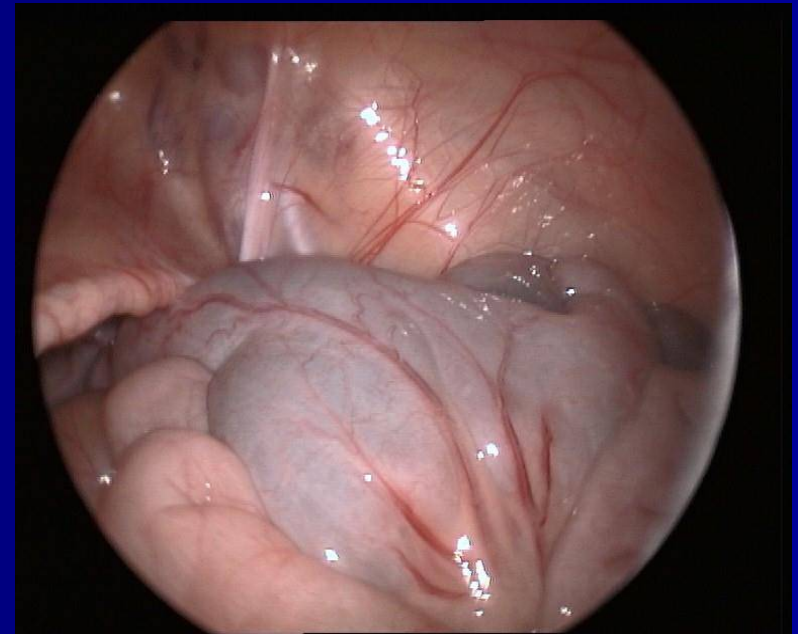
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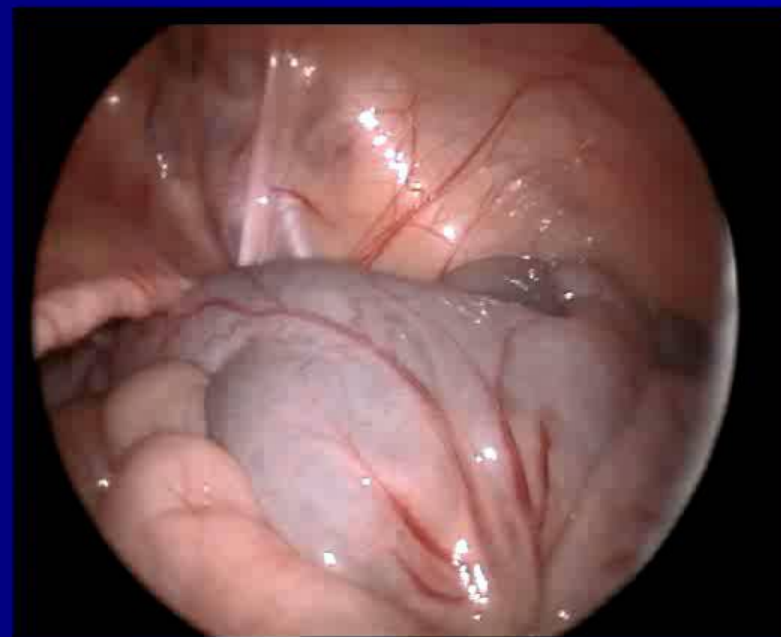
Disadvantages

- 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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- Difficult in case of complicated appendicitis



Thank You



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

