


Laparoscopic Management of Stress Incontinence

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Stress Incontinence

- Genuine stress incontinence is the involuntary loss of urine which occurs when the intravesical pressure exceeds the maximum urethral pressure in the absence of a detrusor contraction.
- The preferred therapy for genuine stress incontinence is surgery.





Pathophysiology

- In genuine stress incontinence the proximal urethra is displaced outside the abdominal cavity.
- Stress incontinence then results from inadequate transmission of increases in intra-abdominal pressure to the proximal urethra.
- The urethra has in fact lost its retropubic position due to attenuated support. As a result, coughing will produce an immediate increase in intravesical pressure but not a concomitant increase in intraurethral pressure, and a dribble of urine results.



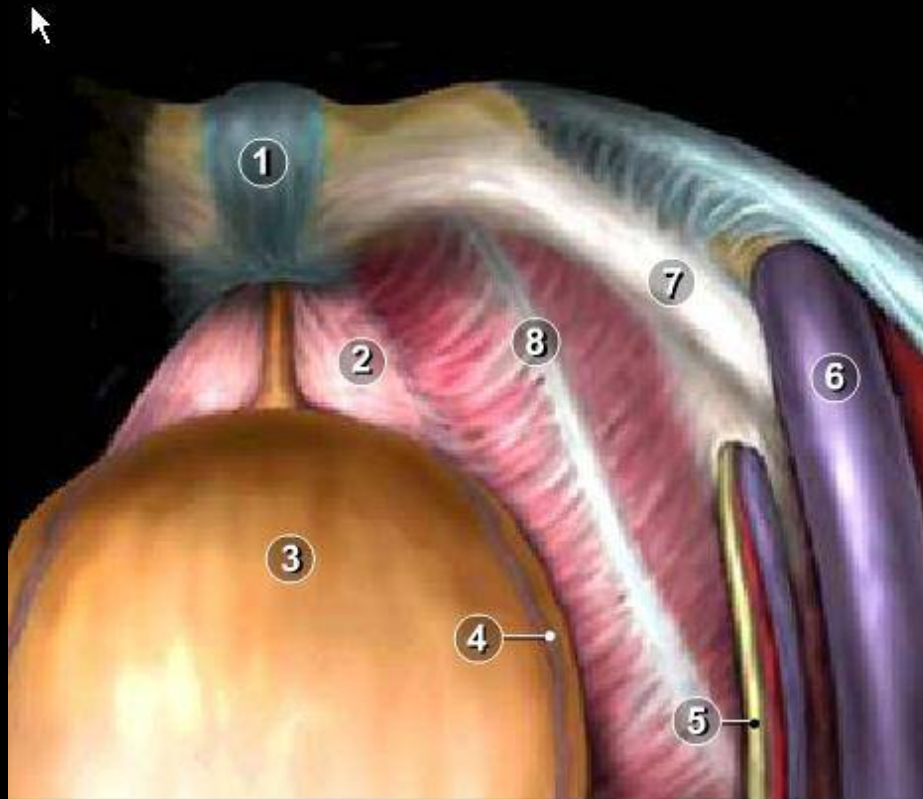


Burch Procedure

- The Burch procedure is considered by many to be the gold standard for surgical treatment of genuine stress incontinence.
- The Burch procedure requires the elevation of the anterior wall of the vagina to the level of the origin of the paravaginal fascia by suspension from Cooper's ligaments (iliopectineal ligaments).
- A properly performed Burch procedure cures 93 percent.



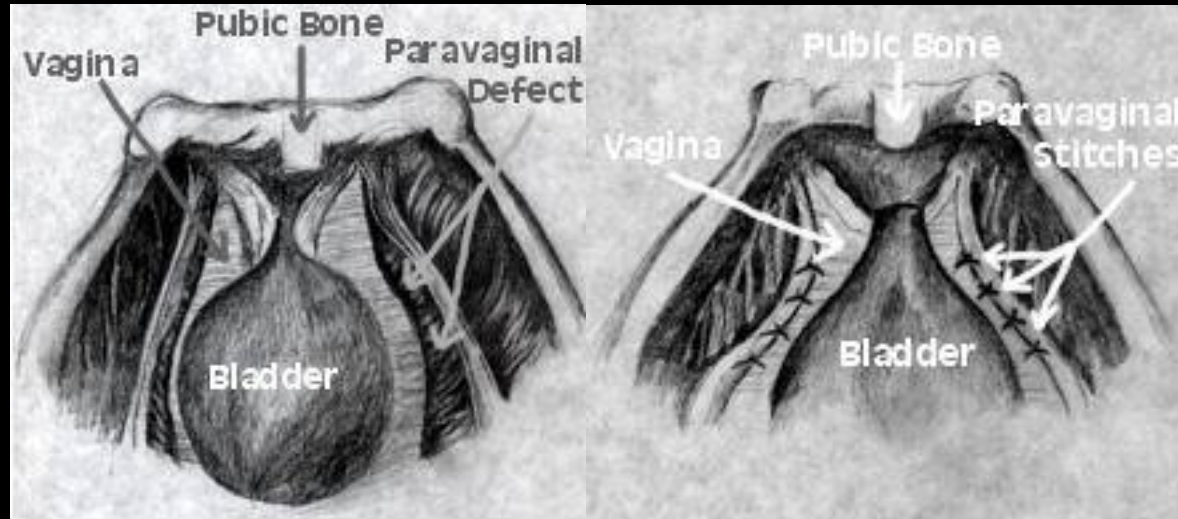
Anatomy



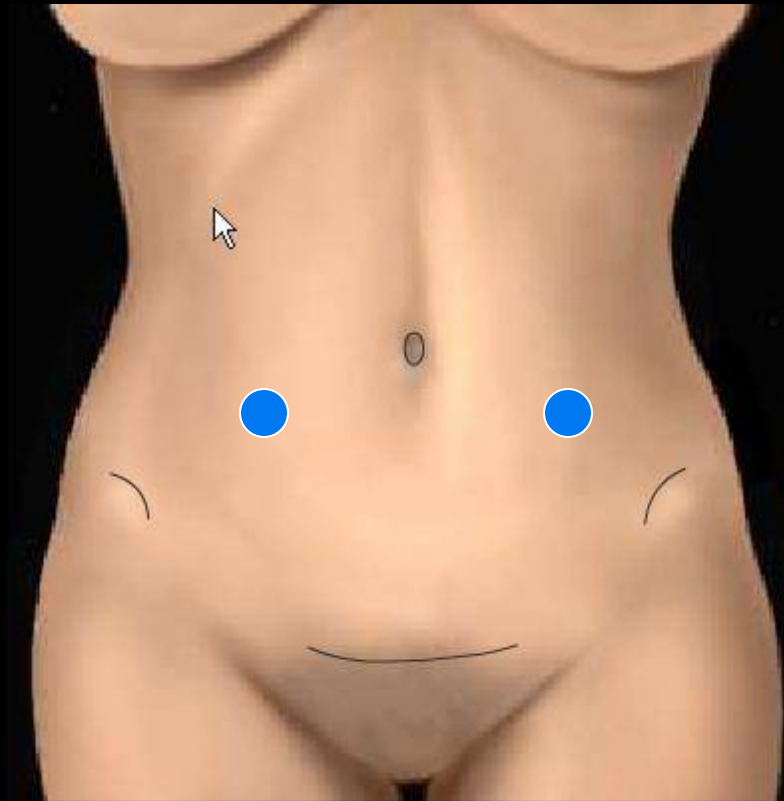
1. Pubic symphysis
2. Lateral part of vaginal vault
3. Bladder with Foley catheter
4. Vesical vein
5. Obturator nerve
6. External iliac vein
7. Iliopectineal (Cooper's) ligament
8. Tendinous arch of levator ani muscles



Laparoscopic Burch Suspension



Port Position



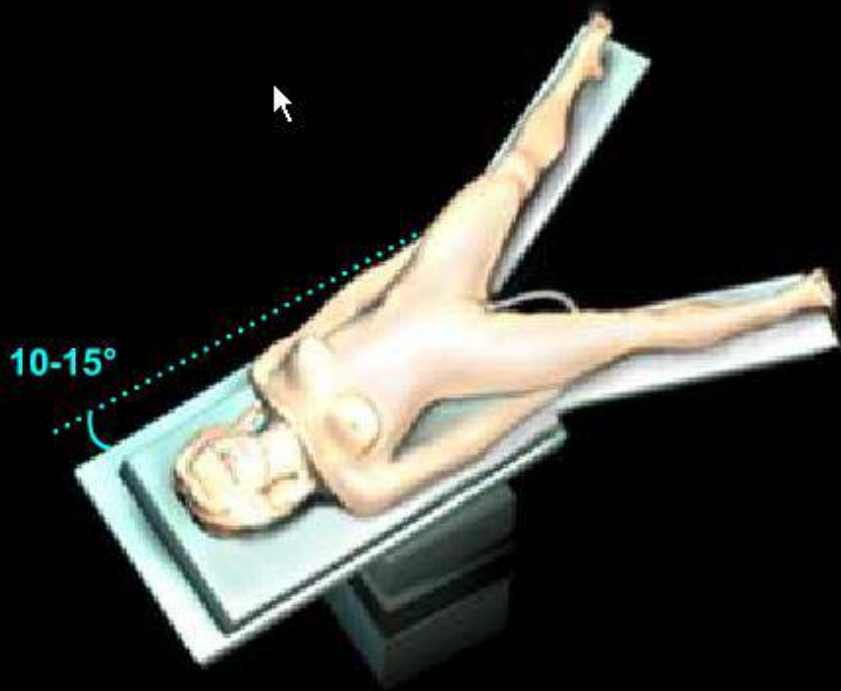
Patient Position



Patient and Port Position



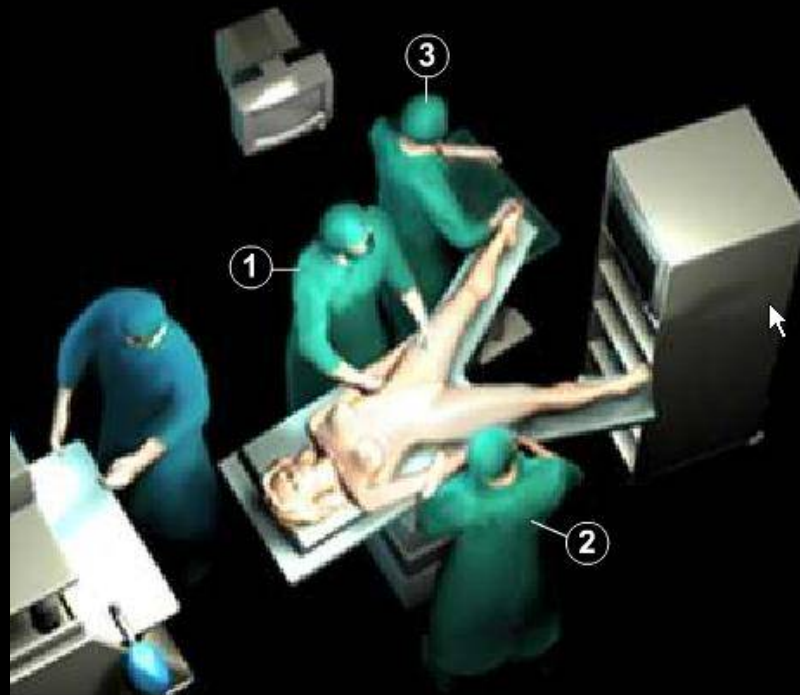
Patient Position



- bowel preparation not mandatory;
- indwelling Foley catheter;
- legs spread, 10° to 15° Trendelenburg;
- pneumoperitoneum with Palmer needle.



Surgical Team



1. The surgeon is on the left side of the patient.
2. The assistant is on the right side of the patient.
3. The scrub nurse is on the patient's left, next to the surgeon.



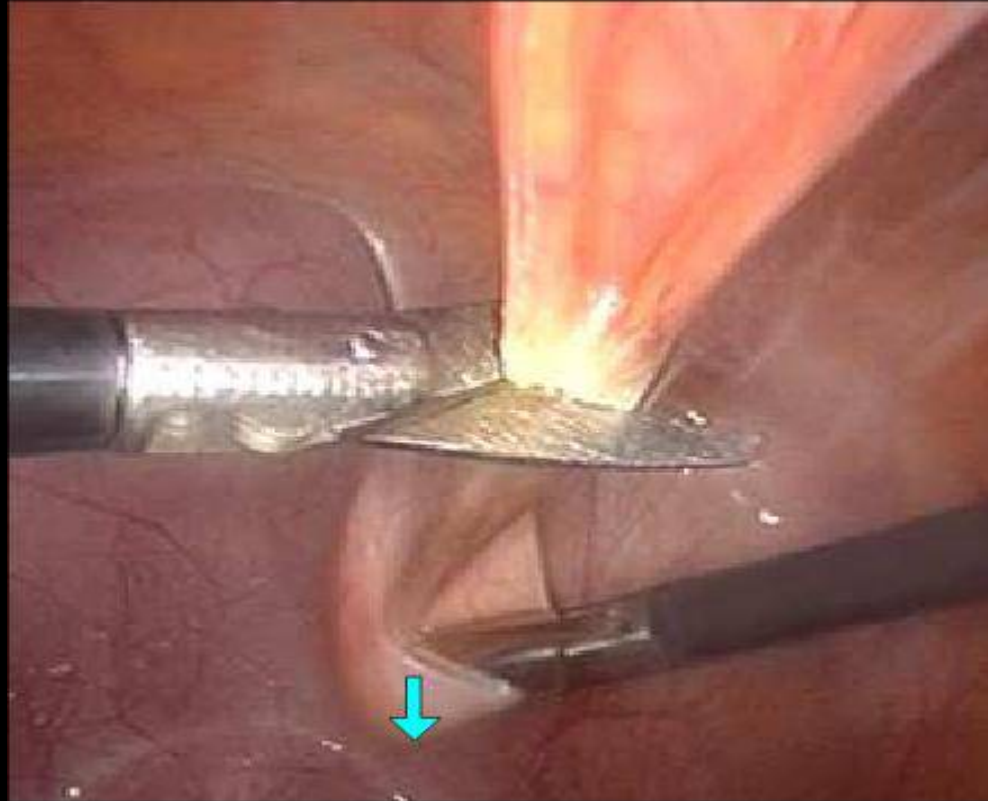


Procedure

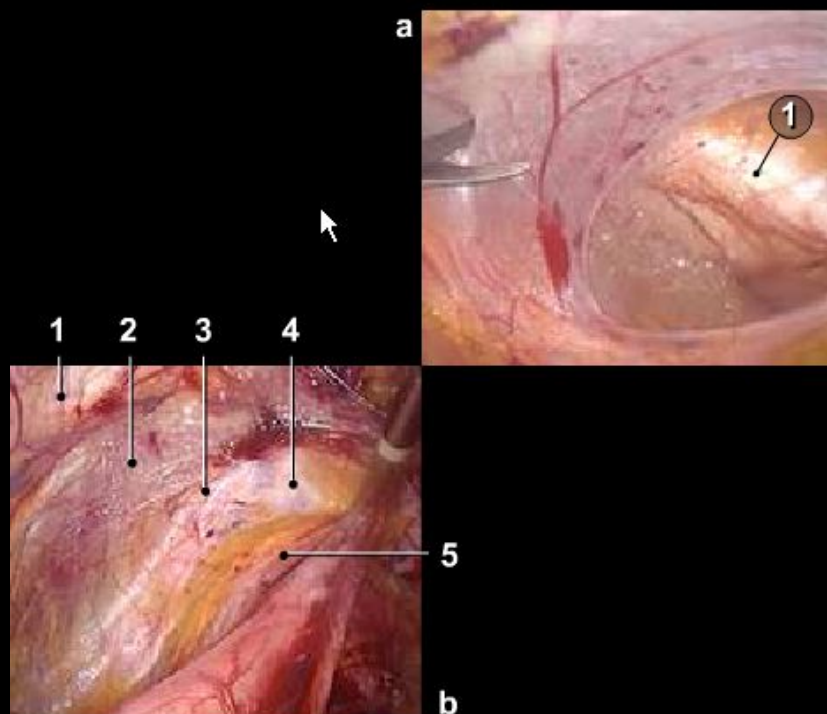
- 300 cc of methylene blue solution is placed into the bladder to keep the bladder weighted down and to allow the clear delineation of the dome of the bladder.
- Three Port technique is used one in Umbilicus and two 5cm lateral and slightly below the umbilicus



Peritoneal Incision



Dissection



● Peritoneal incision

● Opening of Retzius' space

a. Dissection of the retropubic (Retzius') space on the right

b. Dissection of the retropubic space on the left

1. Pectineal (Cooper's) ligament

2. Levator ani muscles

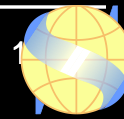
3. Insertion of the vagina on the levator ani muscles

4. Vagina

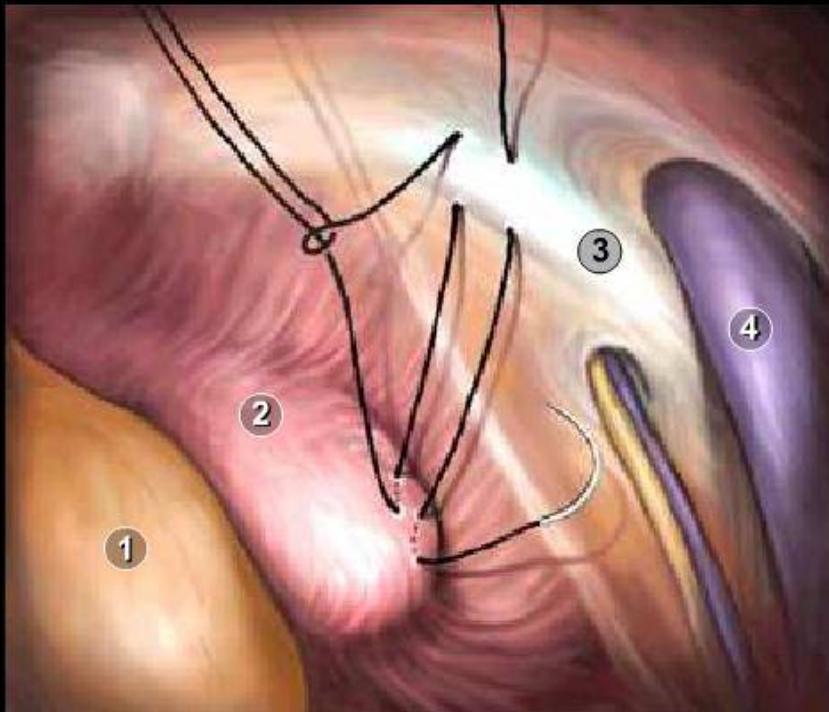
5. Vesical vein

Once the supravescical peritoneum has been incised, the correct dissection plane, situated between the abdominal wall and the bladder, must be found. A common error is to dissect too close to the bladder, which can lead to a vesical injury. The dissection plane should be avascular.

Dissection of the retropubic space is pursued until the pectineal ligaments on the posterior surface of the superior pubic rami can be seen. These ligaments have



Suture

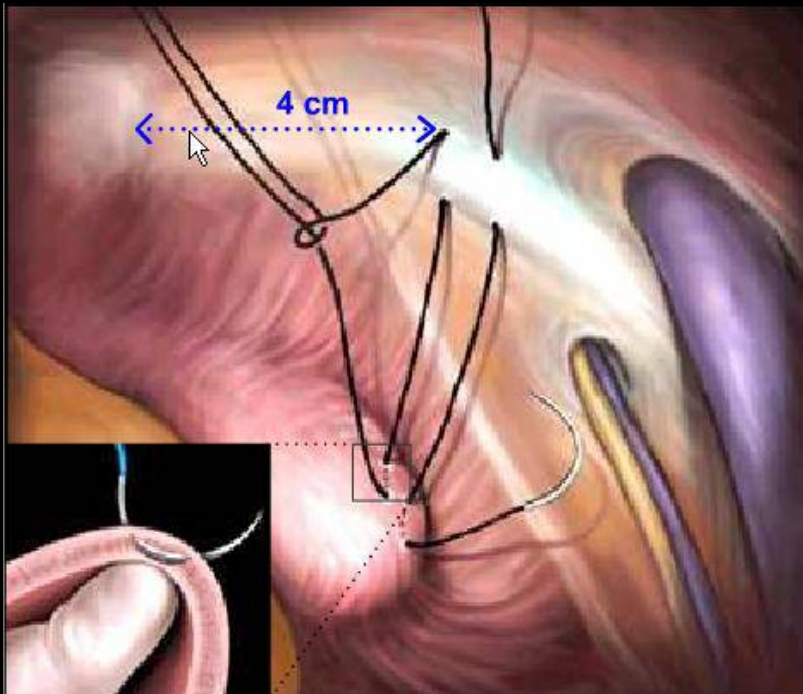


1. Bladder with balloon
2. Vaginal vault
3. Pectineal ligament
4. External iliac vein

Non-absorbable braided suture is used. The needle is introduced into the abdominal cavity through the 8 mm central suprapubic trocar. The surgeon makes 2 stitches on each side, from the pectineal ligament to the vaginal vault.



Suture

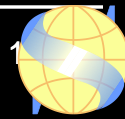
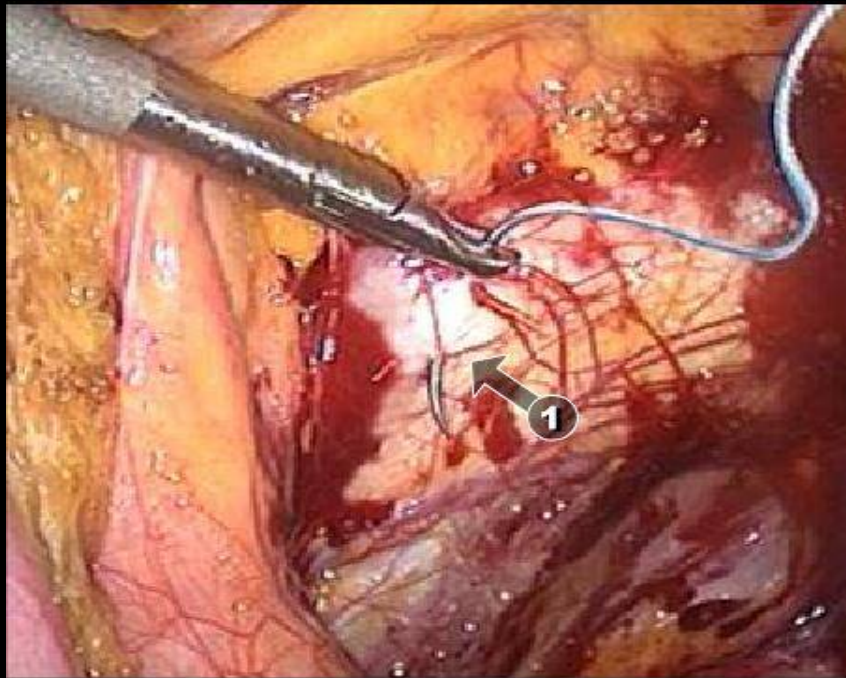


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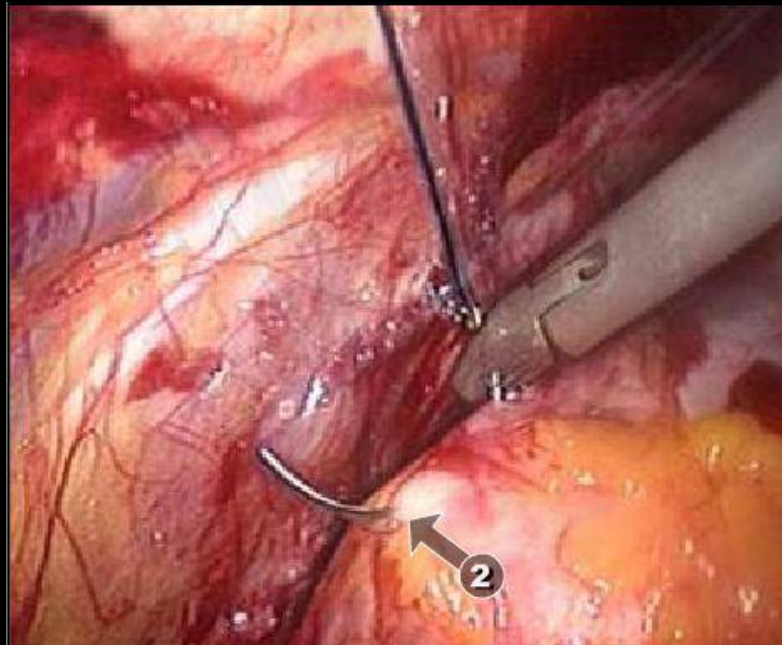
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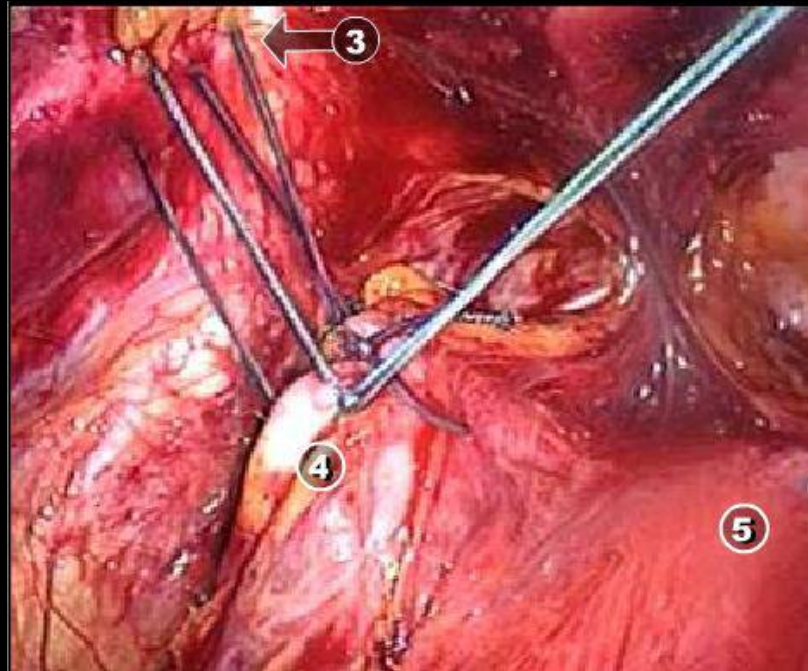
Suture



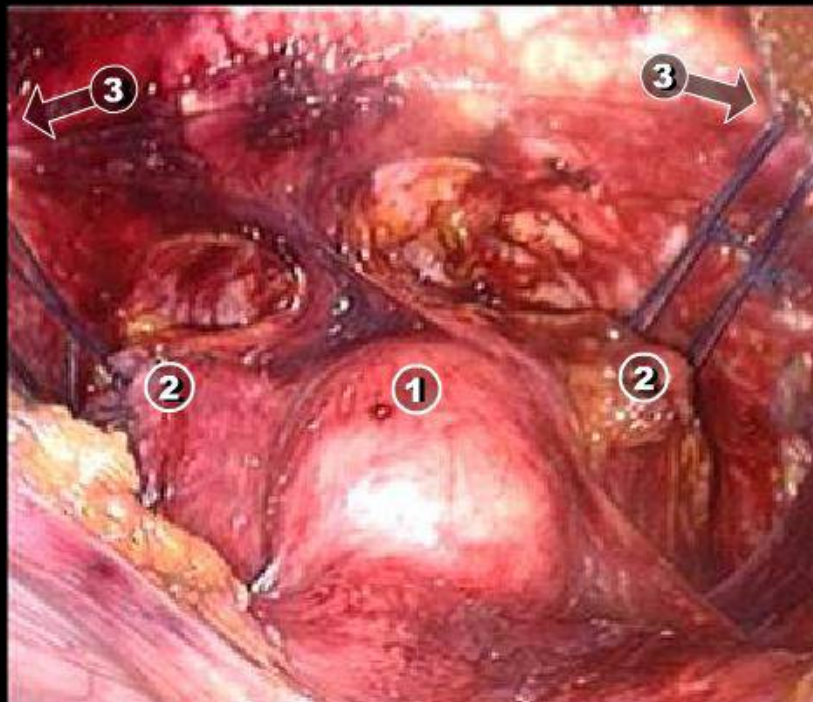
Suture



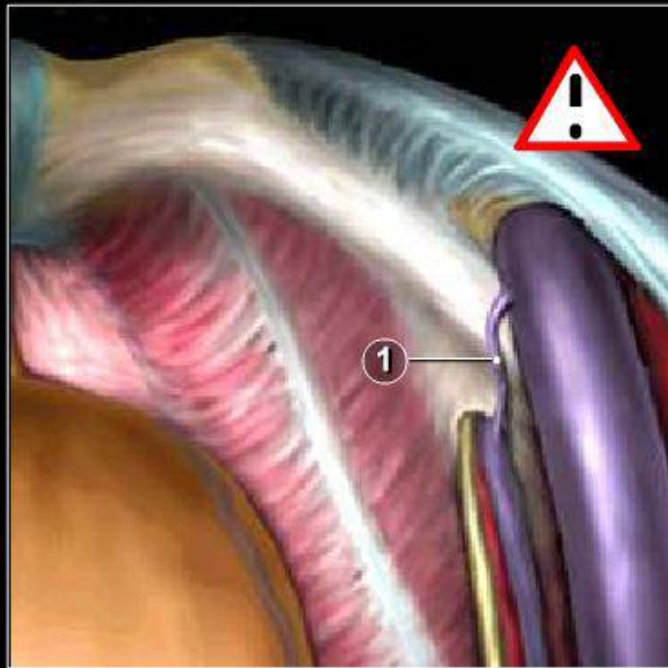
Suture



Final View



Complication



Laparoscopic Burch suspension



Colposuspension



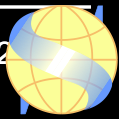
Trocar placement

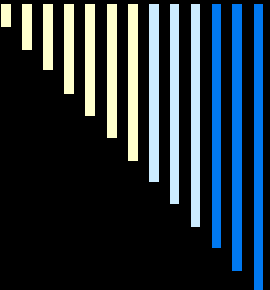
Laproscopy Hospital



Advantage of Laparoscopic Bladder Neck Suspension

- Decrease in the length of hospital stay,
- Faster recovery, and
- Less scarring due to the smaller incisions





Intraoperative and postoperative complications

- Electrosurgical injury of the bladder
- Transient detrusor instability.
- Urinary retention.





THANK YOU !



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