



Πανεπιστήμιο Κύπρου
Ιατρική Σχολή



Tips and Tricks for Transanal Endorectal Pull- through



Aim

Evaluation

- ▣ Indications for surgery

- ▣ Surgical Technique

- ▣ Results

- ▣ Complications

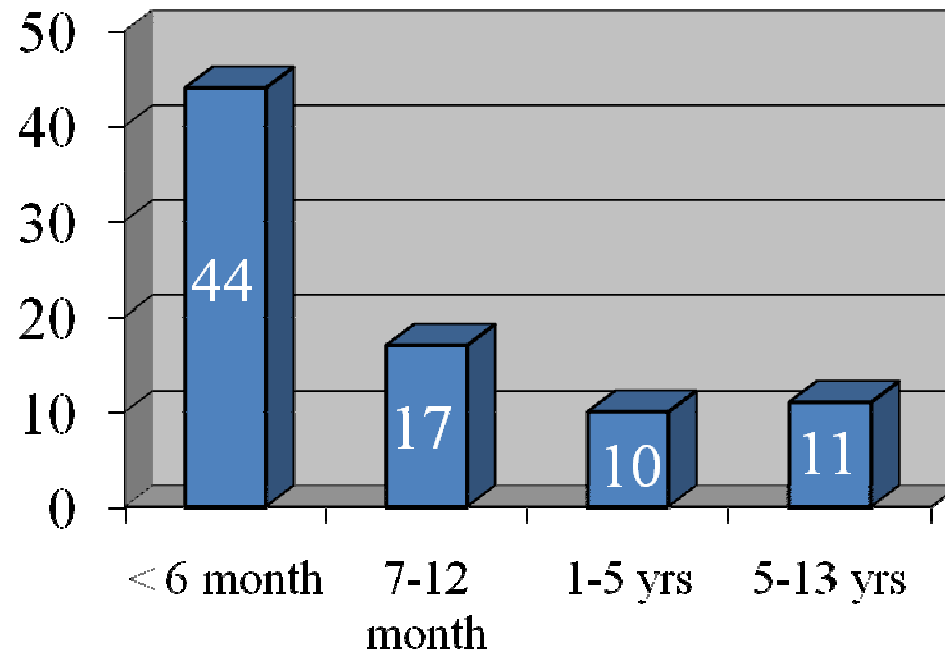


Patients and Epidemics

1999 – 2016

Patients: 82

Sex ratio 9 m/4 f



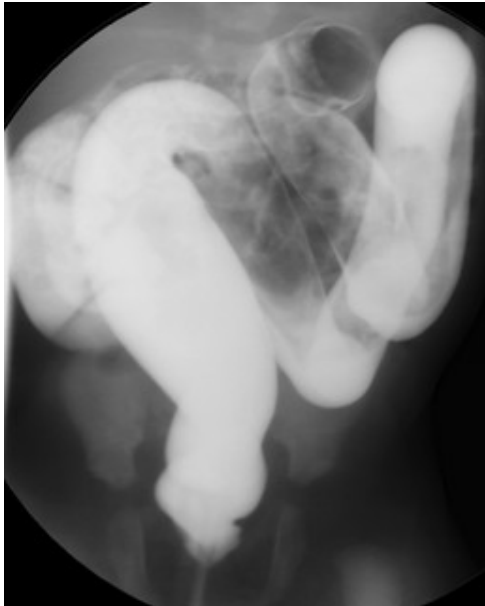


Preoperative workout

- ✚ History: Newborn with failure to pass meconium
- ✚ Colon contrast
- ✚ Trans-anal biopsy
- ✚ Laparoscopic biopsy (depending on results)
- ✚ Routine lab. Investigations
- ✚ No initial colostomy
- ✚ Daily washouts by trained parents



Example 1



✚ Trans-anal biopsy

✚ Trans-anal pull through



Example 2



- ✚ Trans-anal biopsy
- ✚ Trans-anal pull through
- ✚ Frozen sections during operation



Example 3

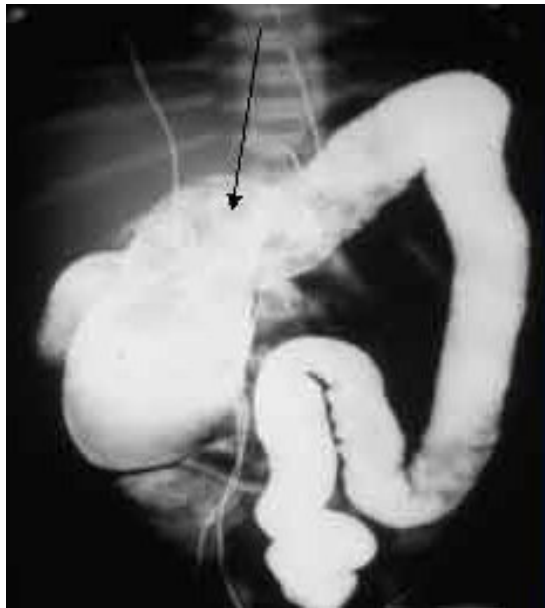


- ✚ Trans-anal biopsy
- ✚ Trans-anal pull through
- ✚ Frozen sections during operation





Example 4



✚ Trans-anal biopsy

✚ Laparoscopic biopsies





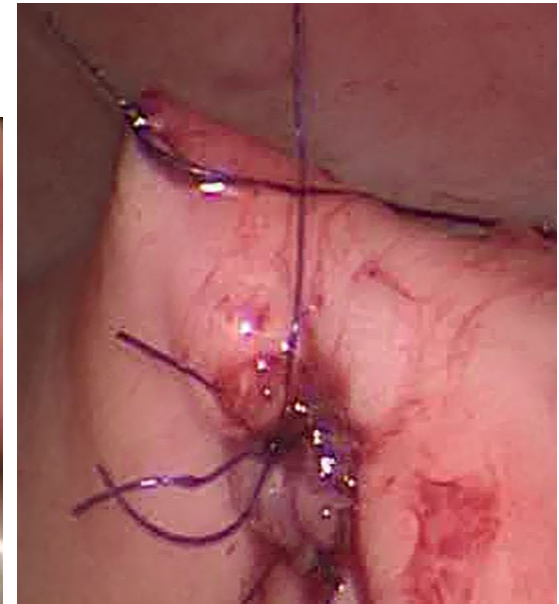
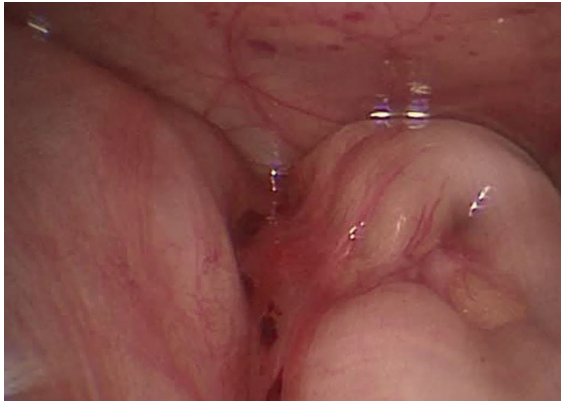
Example 5



✚ Laparoscopic biopsies



Laparoscopic Biopsies





Preoperative workout

- ✚ High protein diet for 1 week
- ✚ Bowel washouts for as every day
- ✚ Metronidazole for 3 days
- ✚ i.v. 3rd generation Cephalosporin for one day



Pre-operative preparation

- ✚ Lithotomy position
- ✚ Crossed legs that can be pulled down for laparotomy
- ✚ Urine catheter (avoid urethral injury)



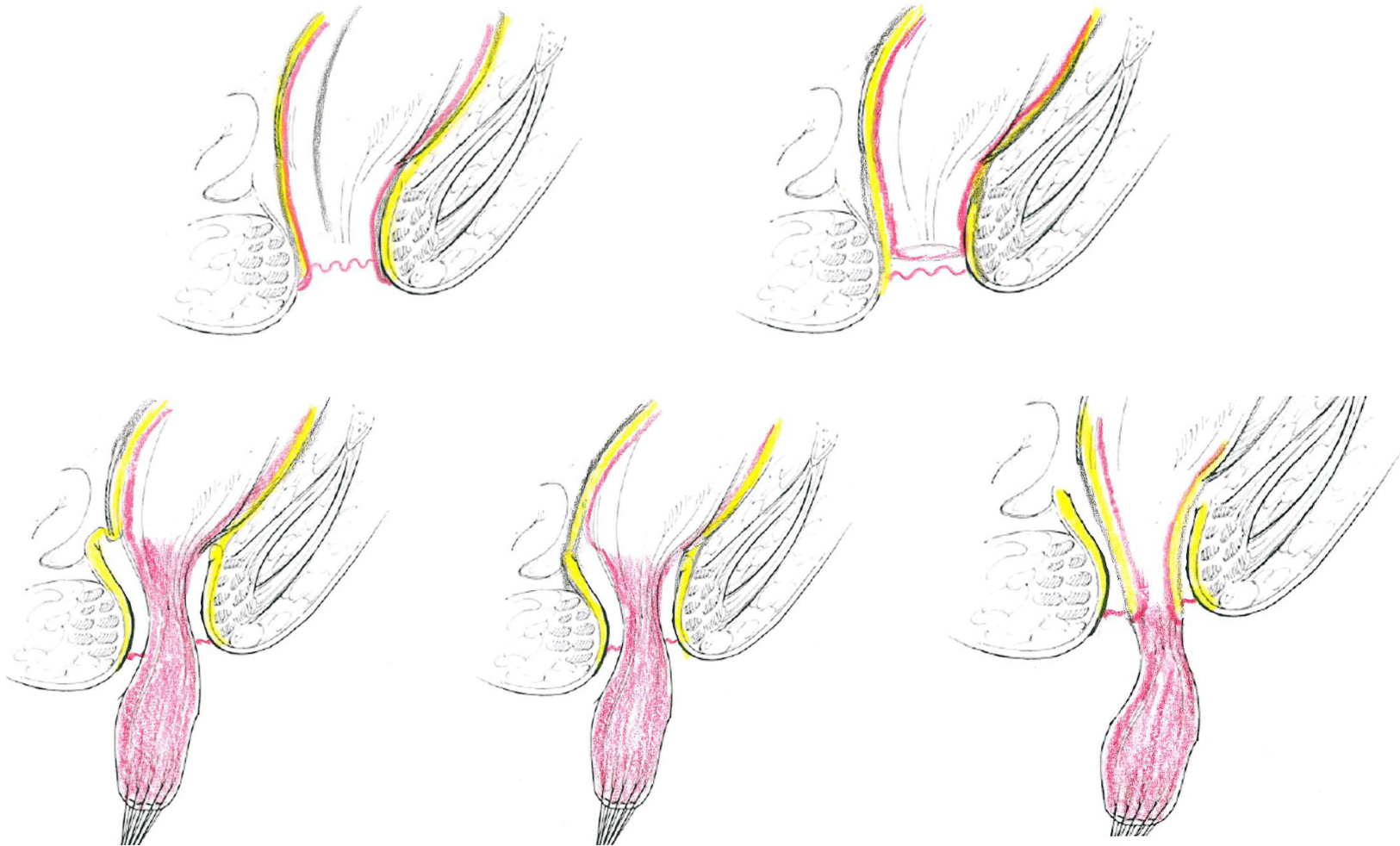


Surgical Steps

- ✚ Stay sutures: 12, 3, 6, 9 o'clock, and 1, 4, 7, 11 o'clock
- ✚ Incision: 1/2 cm above the dentate line
- ✚ Mucosal dissection: 5-7 cm in the submucosal plane
- ✚ Ensure position above the peritoneal reflection
- ✚ Split muscle cuff in the posterior midline
- ✚ Frozen Section below the point of anastomosis
- ✚ One layer 4/0 or 5/0 interrupted absorbable sutures

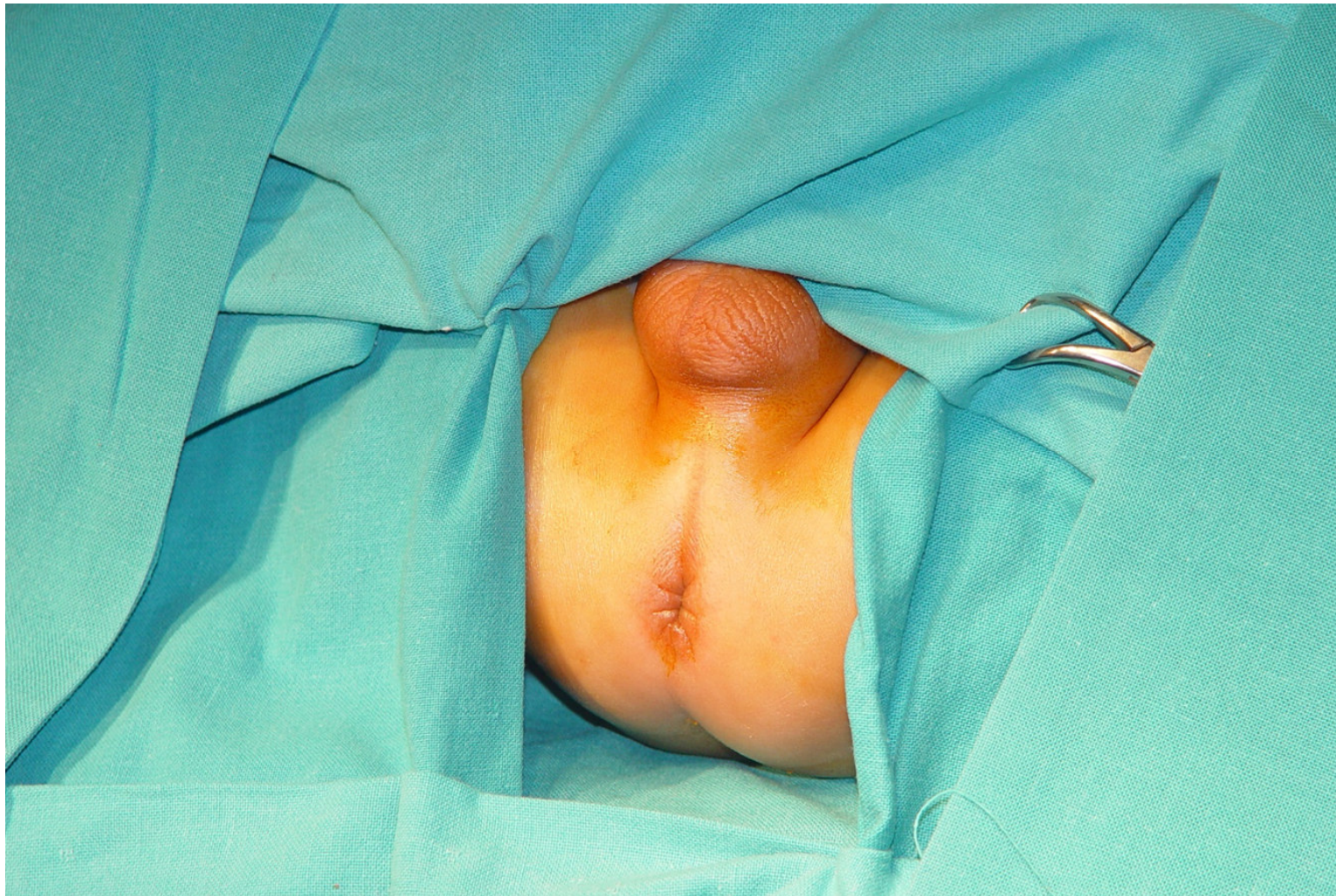


Surgical Steps



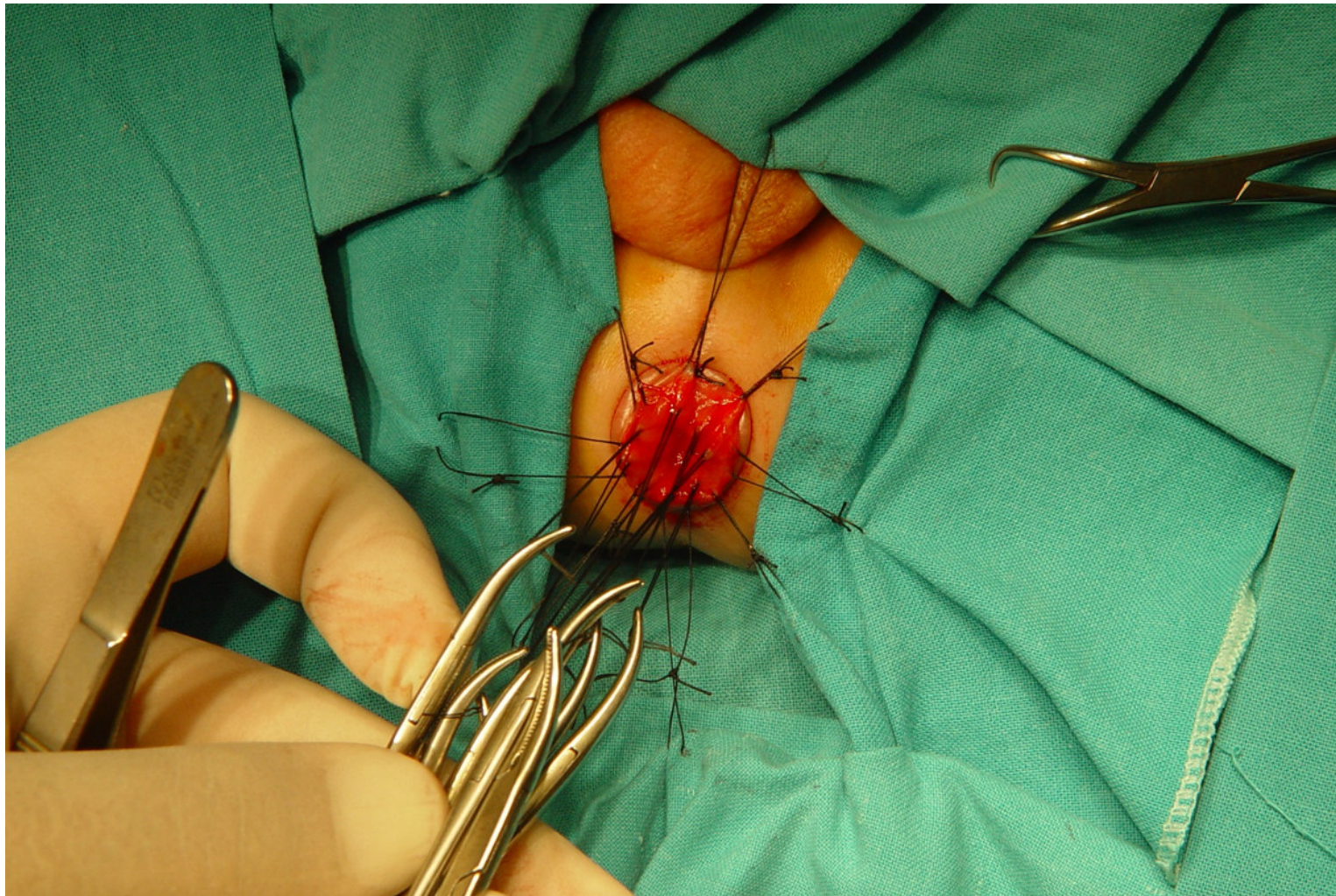


Surgical Steps



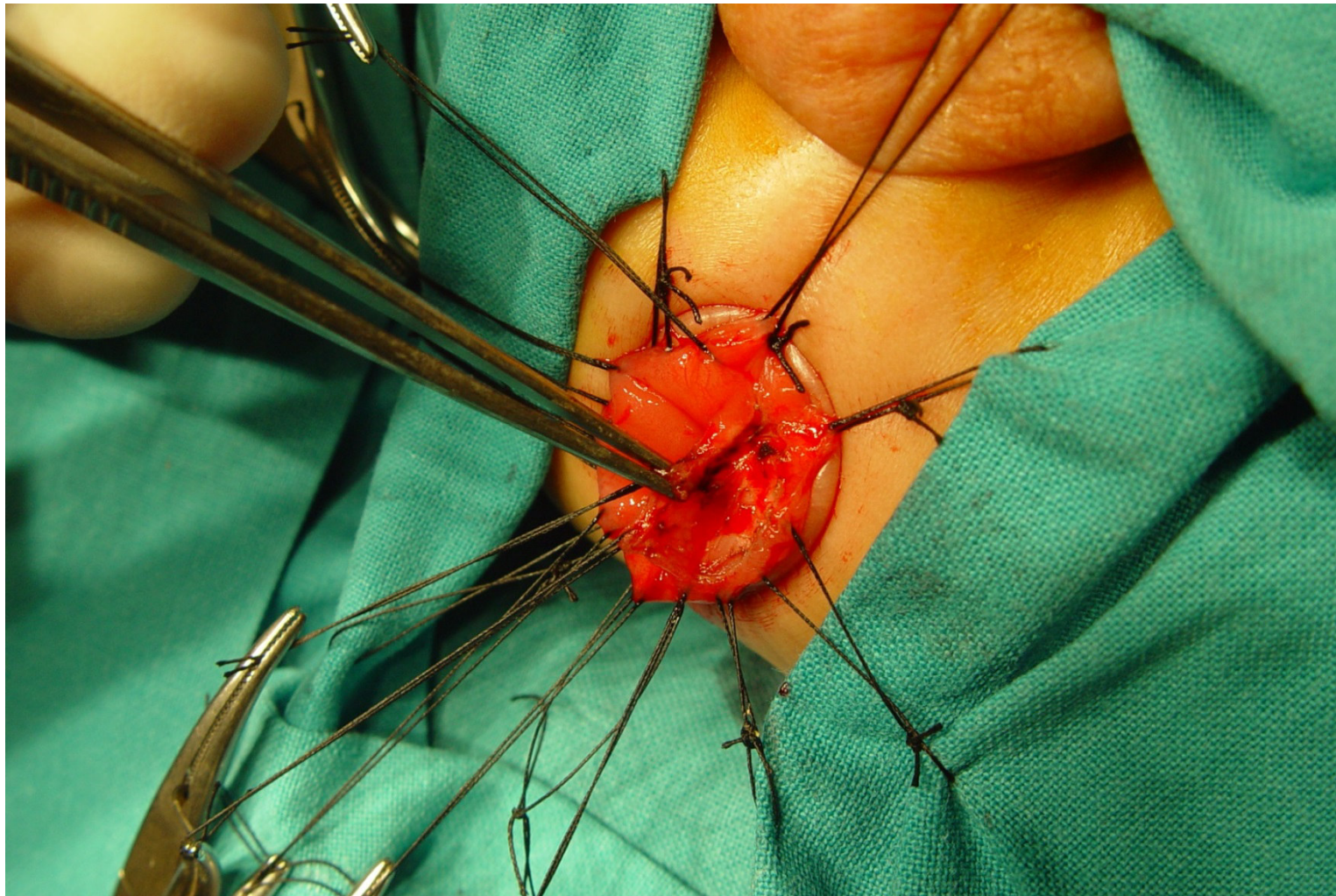


Surgical Steps



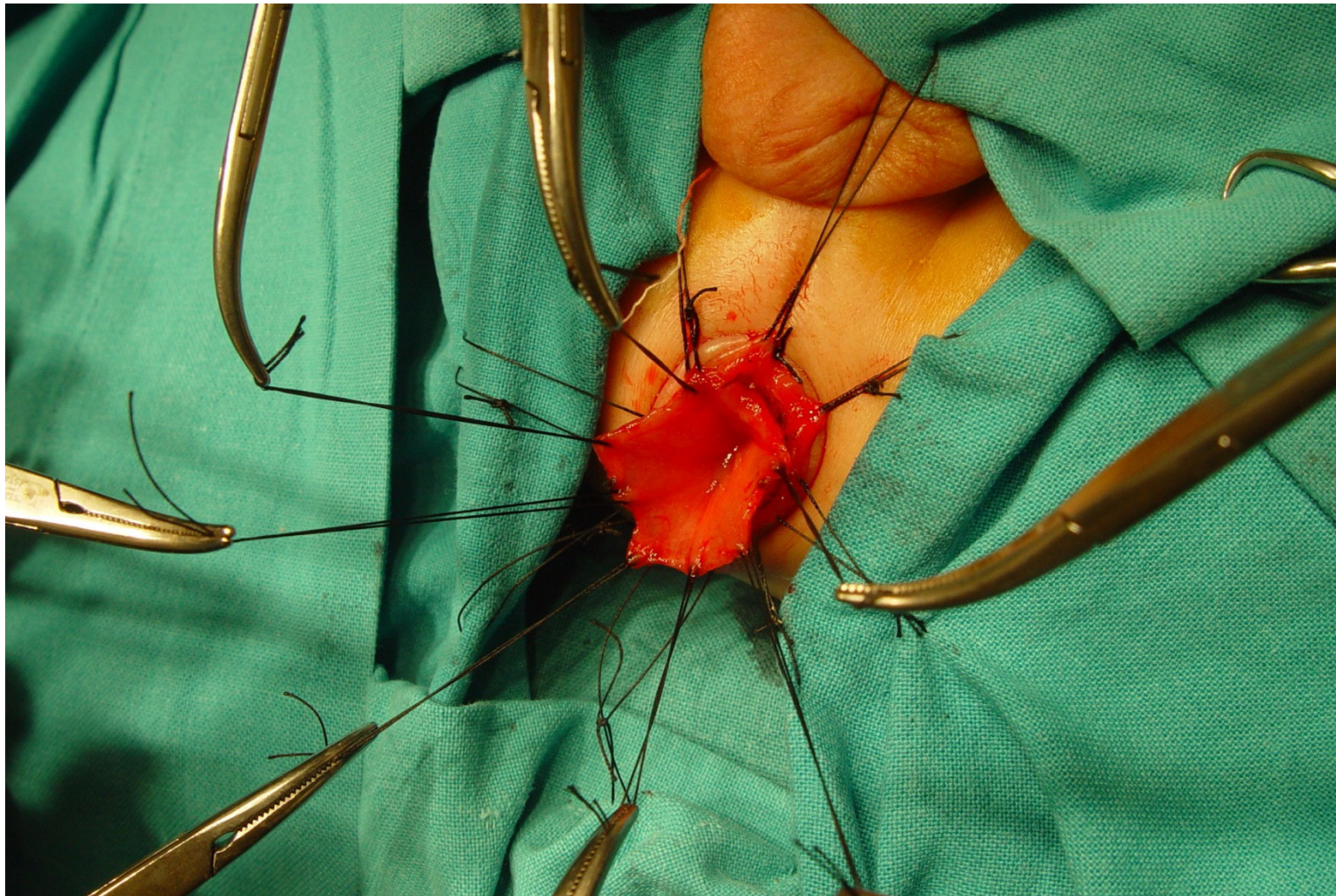


Surgical Steps



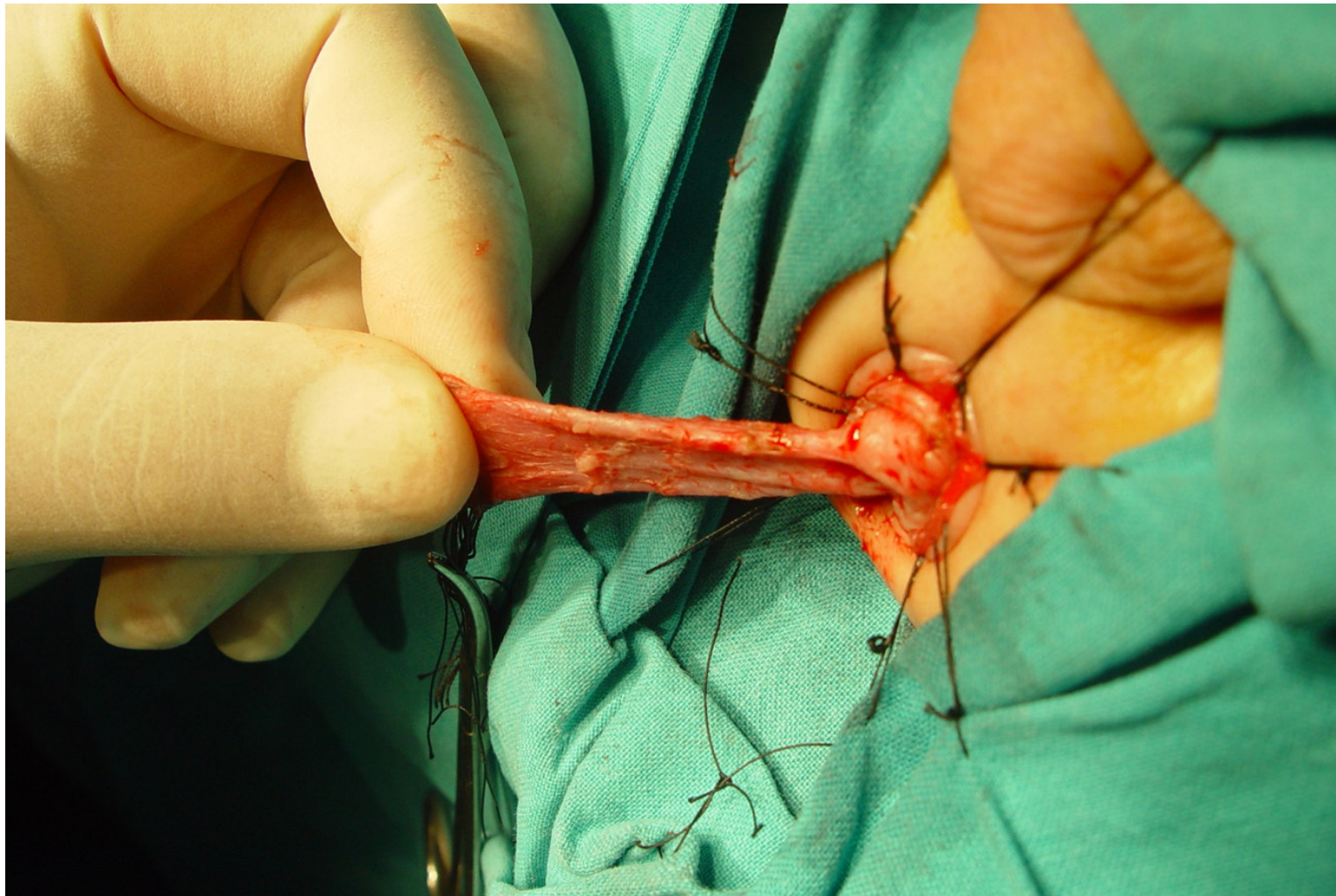


Surgical Steps



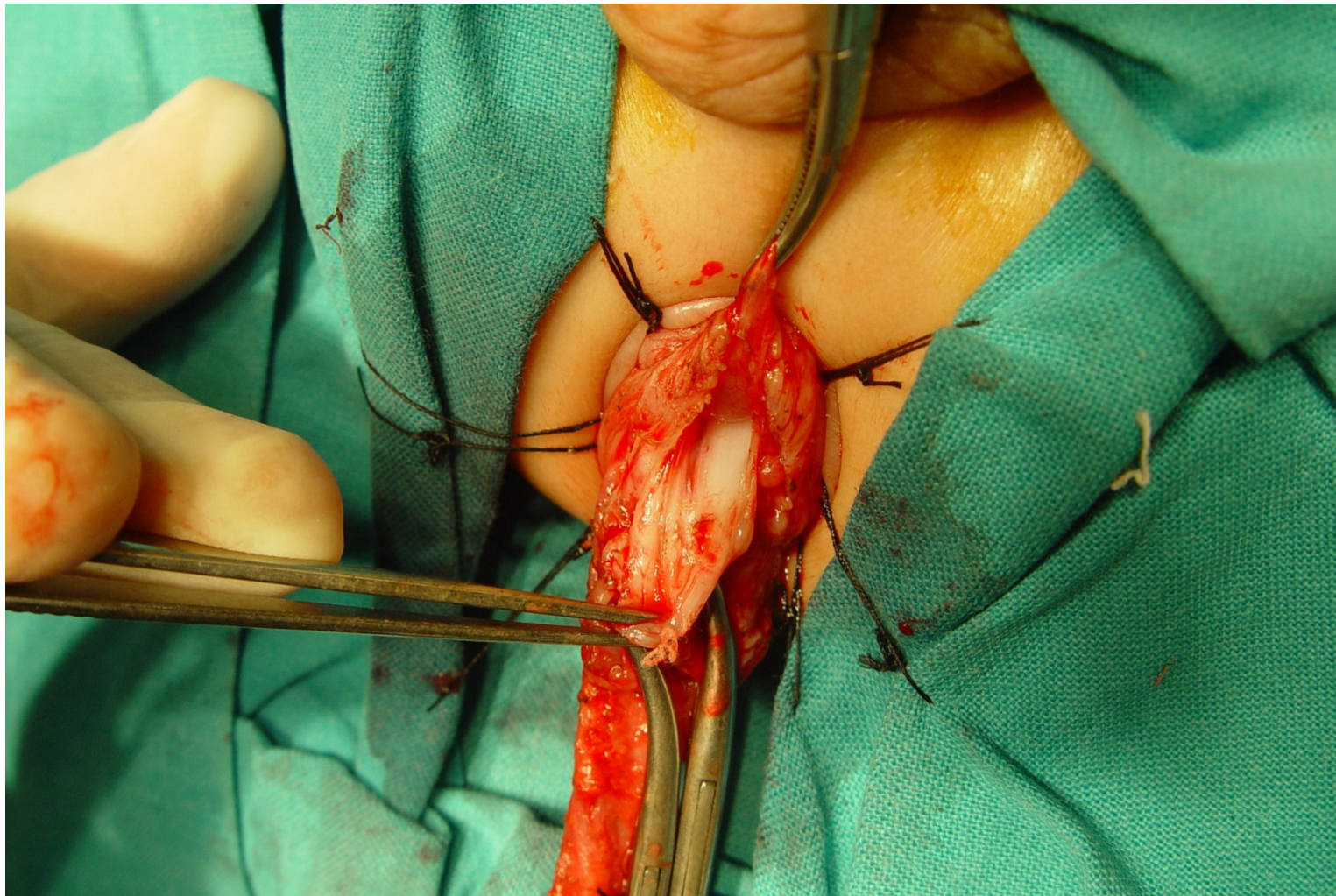


Surgical Steps



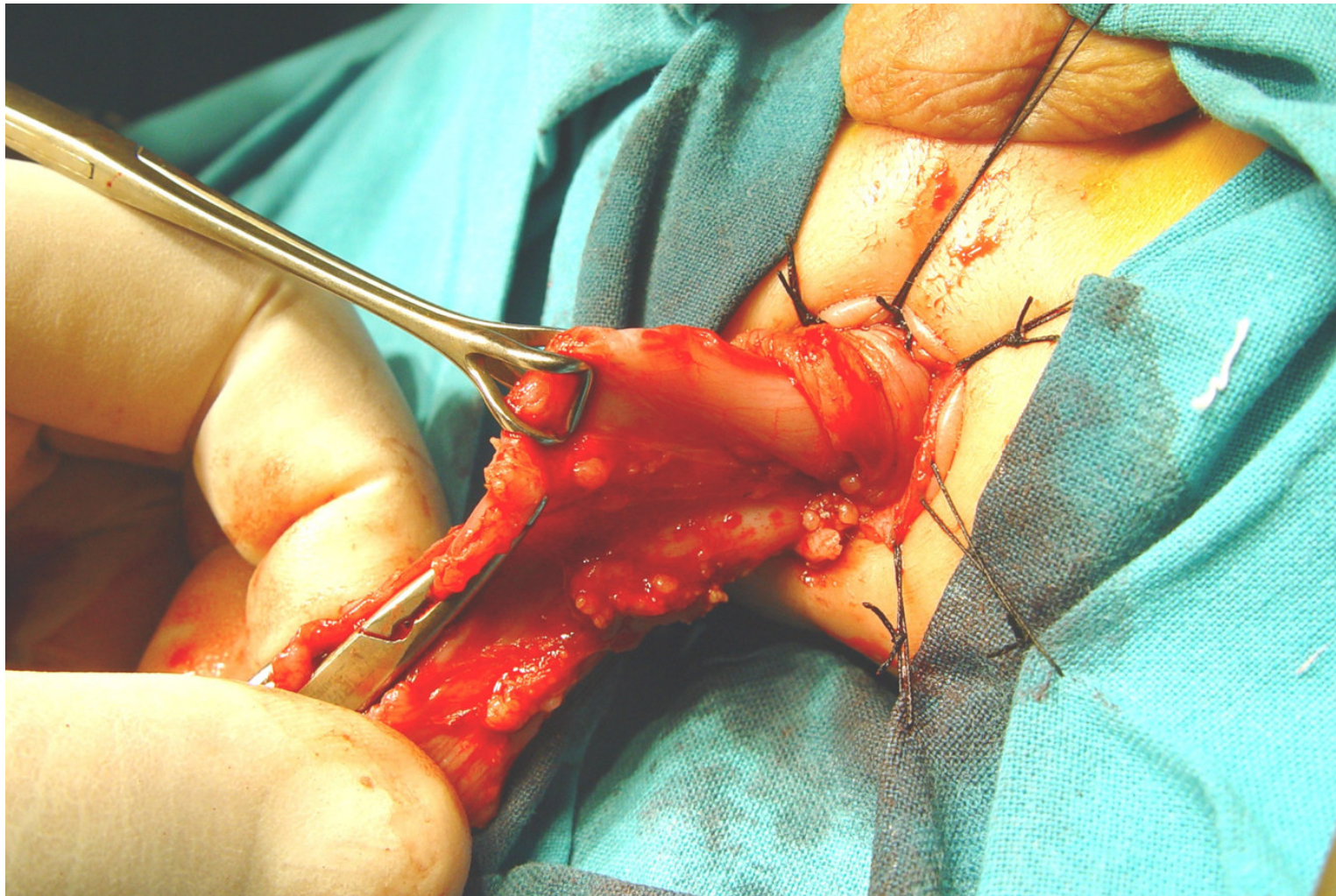


Surgical Steps



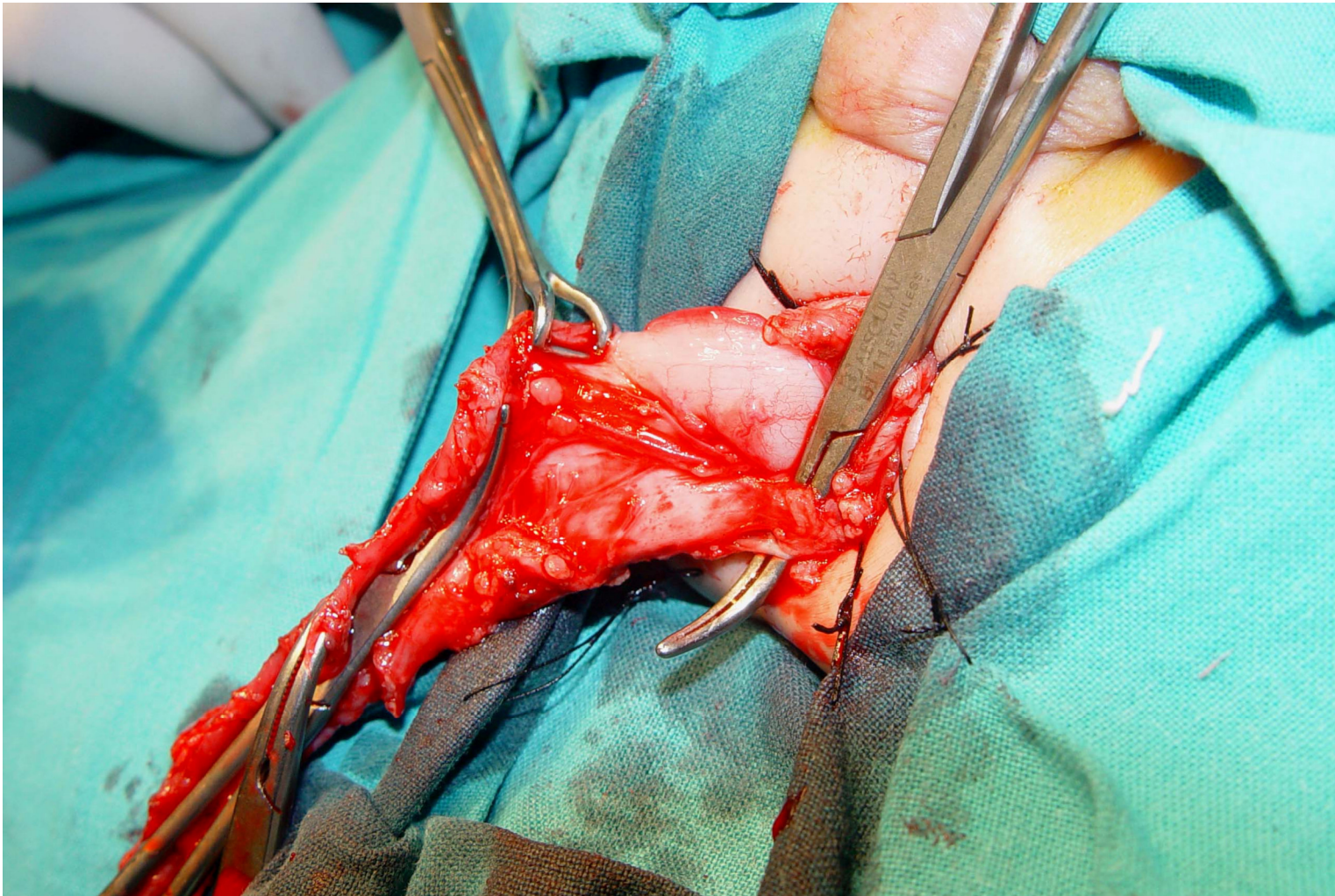


Surgical Steps



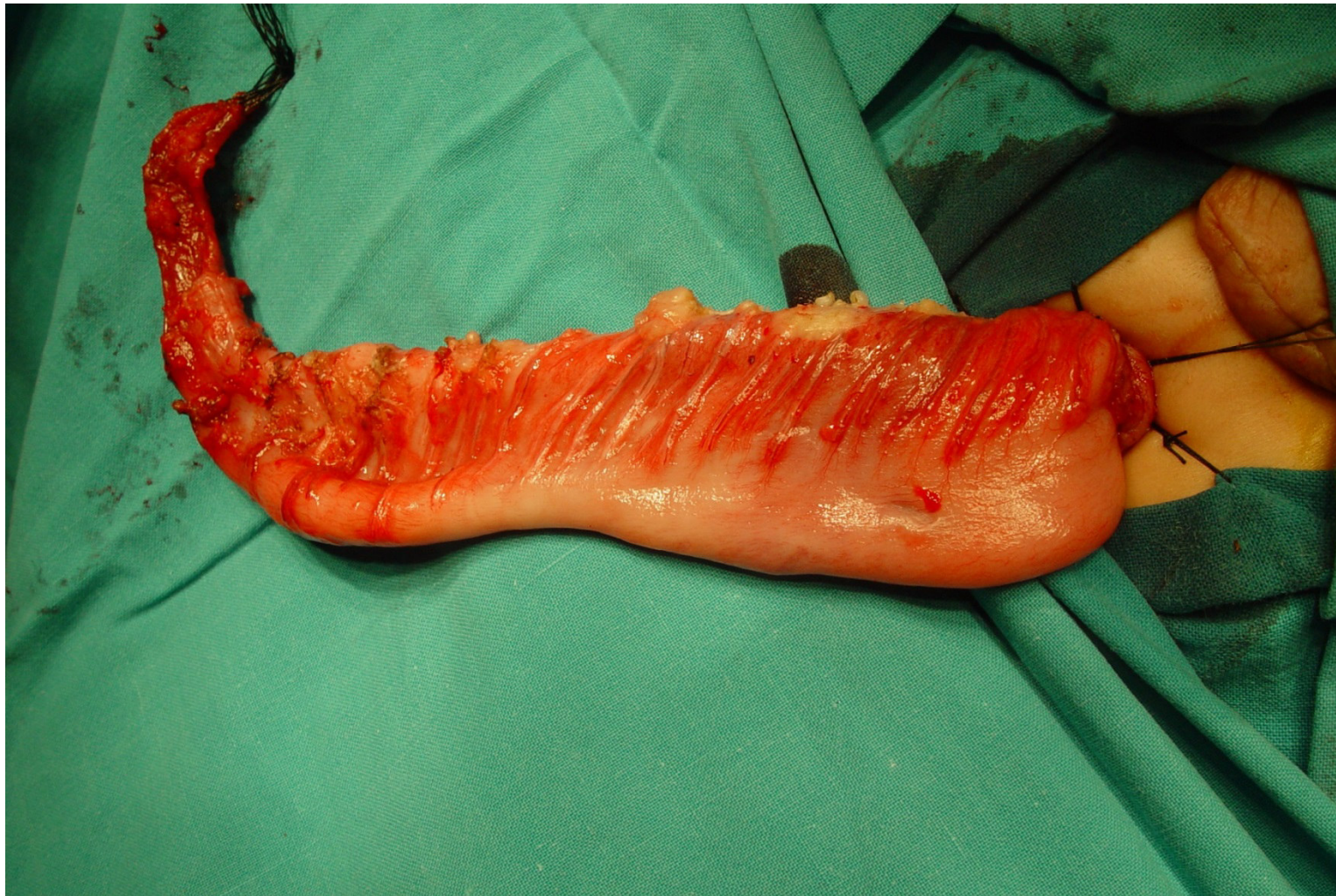


Surgical Steps



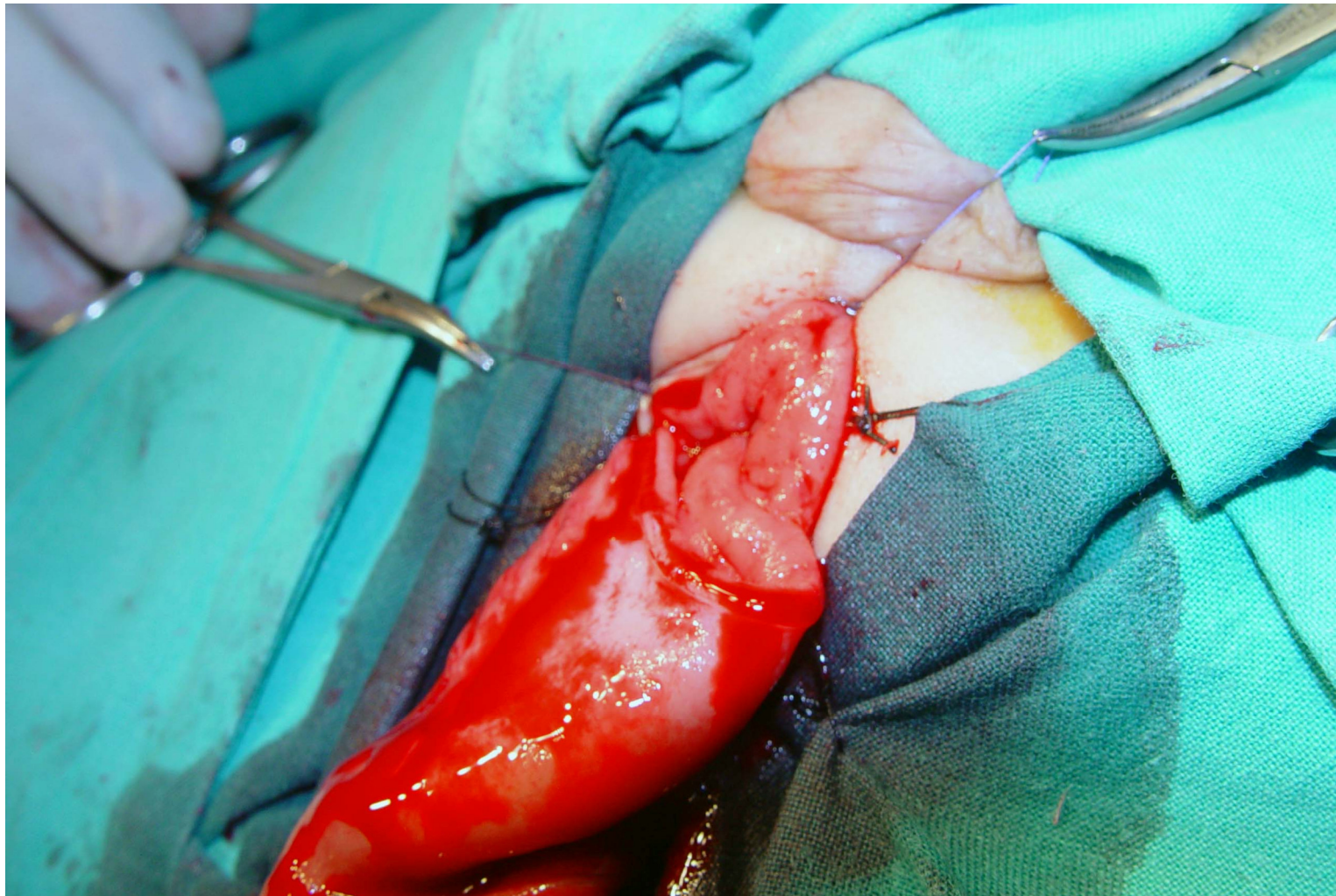


Surgical Steps



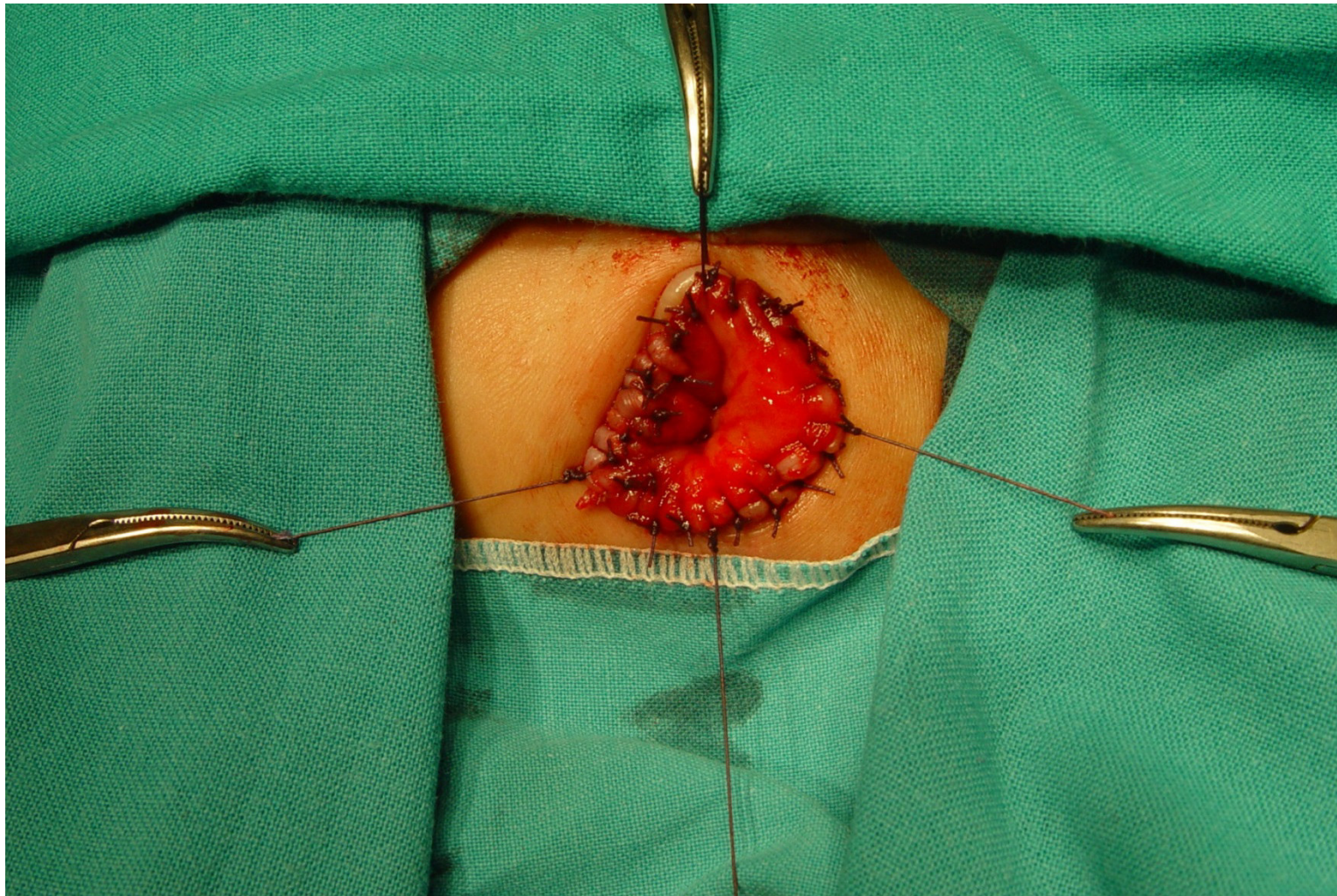


Surgical Steps



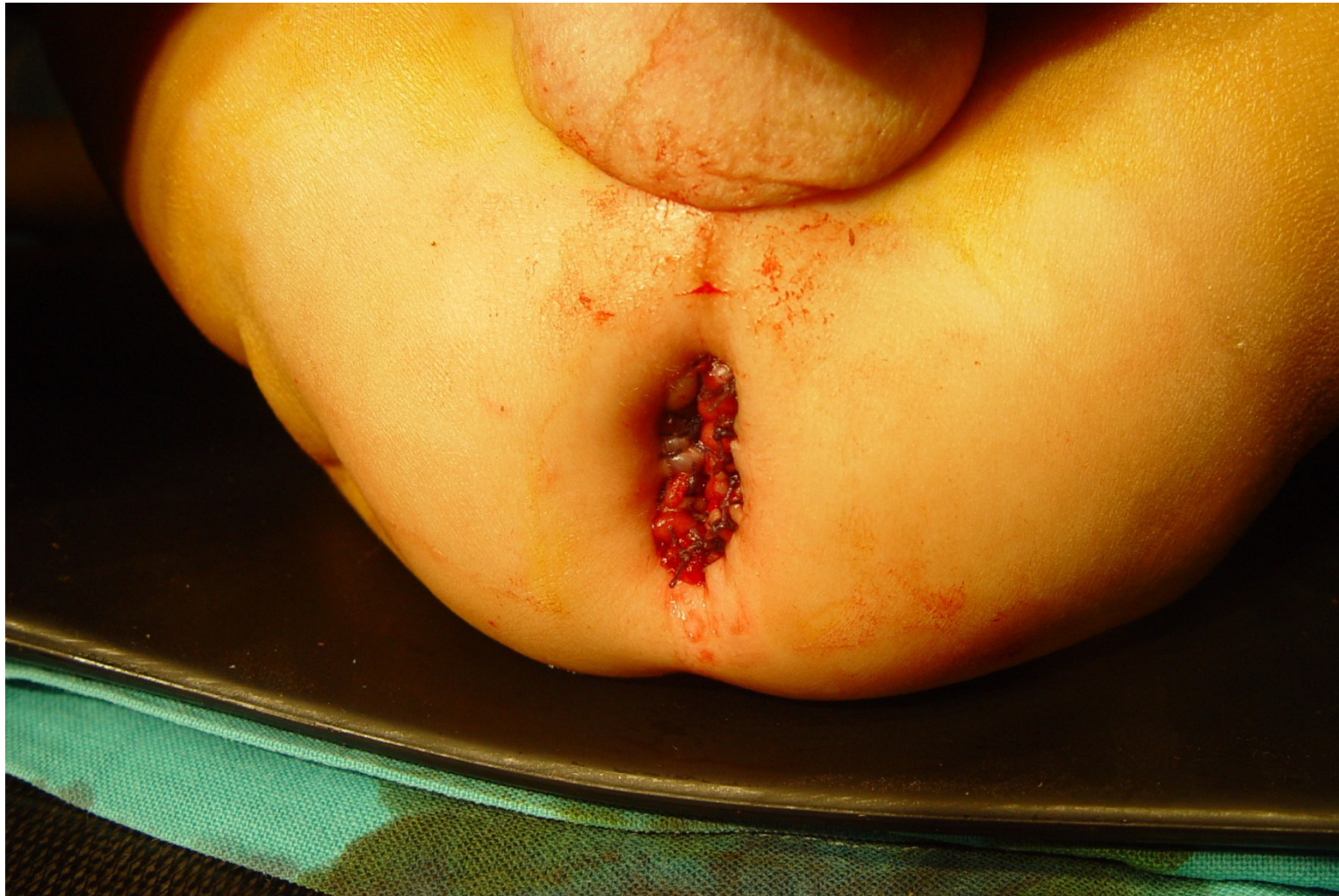


Surgical Steps





Surgical Steps












Surgical Steps








Results

 Satisfactory results	77
 Early complications	5
 Late complications	3
 Mortality	0
 Operative time	95 - 145 min
 Post-operative hospital stay	3-6 days (average 4 days)
 Frequent bowel motions	5-15 times daily for 4-6 weeks









Early Complications

 Leakage 2	Colostomy
 Bleeding 2	Tamponade
 Early Ileus 1	Laparotomy



Late Complications

 Incontinence	0
 Constipation	0
 Cuff abscess	0
 Mortality	0
 Enterocolitis (6/9 months post-operatively)	2
 Stenosis	1



What is new?

Traditional



Colostomy



Single stage
abdomino-perineal pull-
through



Clinical Picture of Hirschsprung's Disease

Rectal Biopsy

No ganglion cells

Definite Funnel
at recto-sigmoid

TEPT
Procedure

Contrast Enema

Definite Funnel
above recto-sigmoid

TEPT procedure
Frozen Sections

No Definite Funnel

Laparoscopic biopsies

Ganglion cells

TEPT procedure
Frozen Sections

No ganglion cells

Leveling
ileostomy



Take Home Message

Transanal Endorectal Pull-through (TEPT) is a safe procedure

- Low morbidity
- Low hospital stay
- Low complications

It may be applied to 85% of Hirschsprung's disease patient