Surgery Collaborative and Long-term Practical Experience Learning

SCaLPEL

Case report

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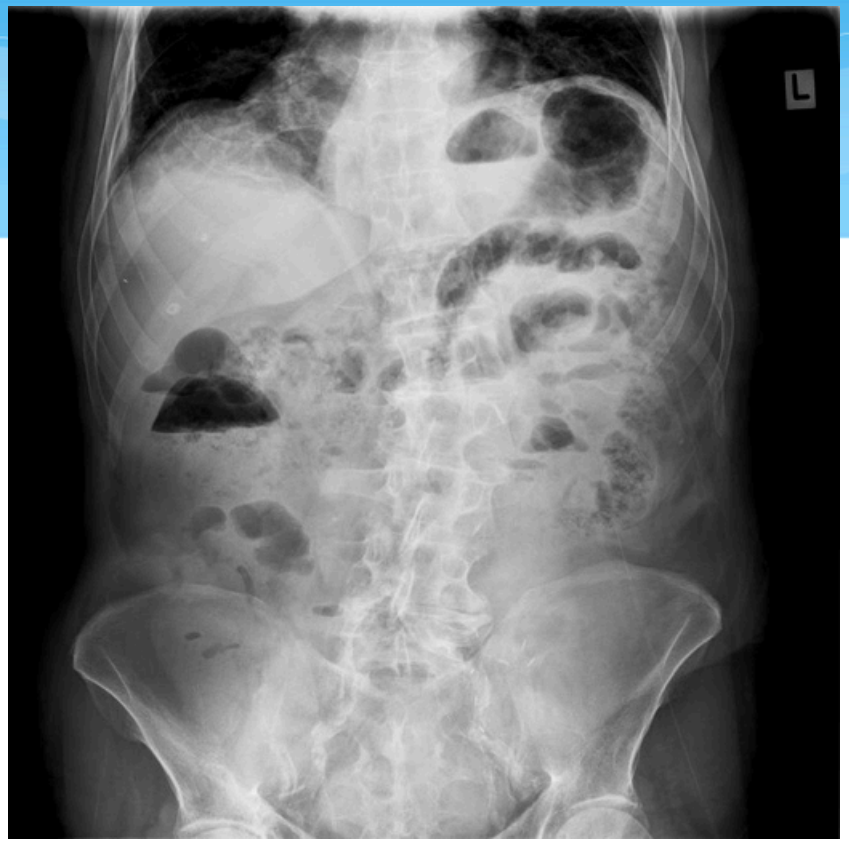
Introduction

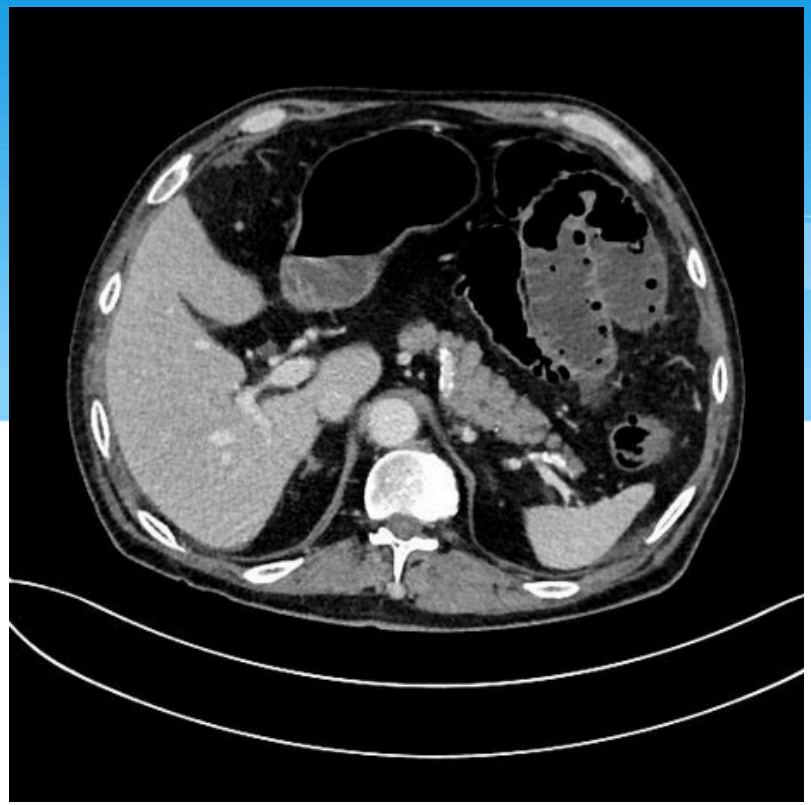
- Male, 70 years old
- Intermittent sharp pain in the upper abdomen
- Kidney transplant in 1994.
- Radical prostatectomy (prostate cancer) in 2017.
- Adjuvant radiotherapy
- Th: **everolimus**, **azatioprin**, **prednizon**, ramipril, nifedipin, simvastatin, furosemid, valganciklovir
- Lost 6 kg in last 40 days

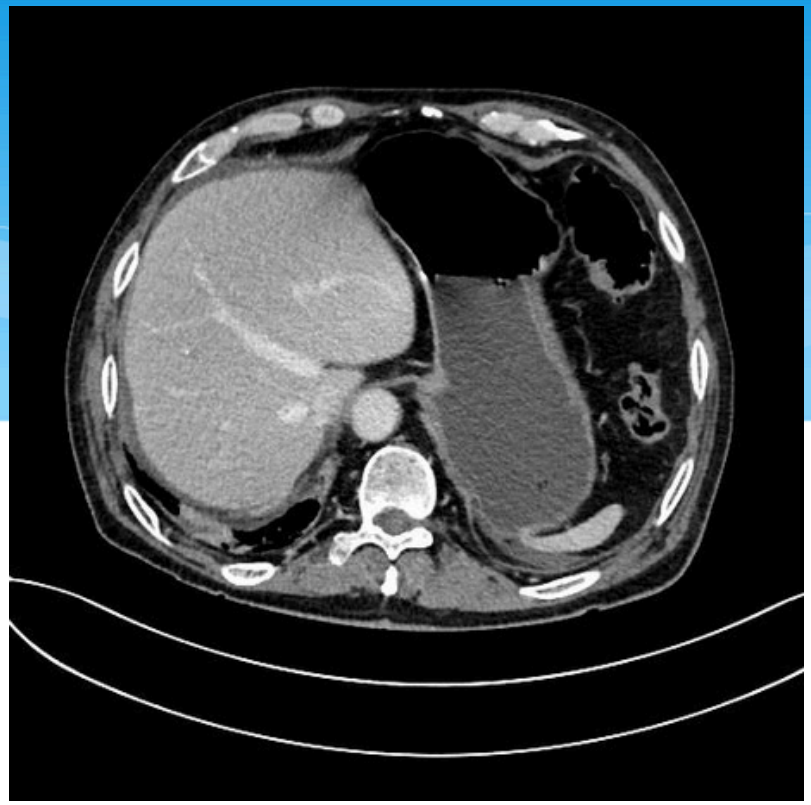
Diagnostics



- LAB: Lkc–9, CRP –28.7
- RTG: air-fluid levels, no distension, no pneumoperitoneum
- US: normalfindings

- Nextmorning: Lkc: 8.6, CRP: 173
- What next?





MSCT: dilatedproximalsmallbowell(3,4 cm), obstruction, pneumoperitoneum, free liquid

What is next?

- Conservative treatment?
- Surgery?

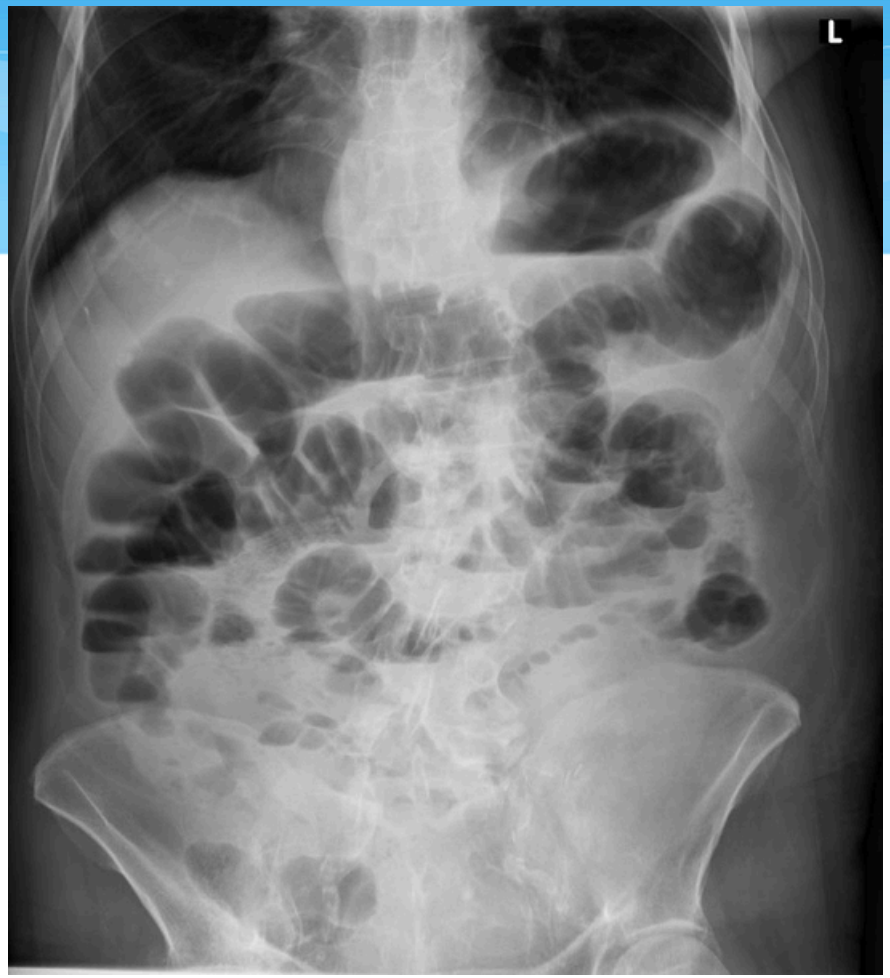
Surgery

- Findings: proximal small bowel perforation (30 cm from ligament of Treitz), peritonitis, adhesions
- Microbiology swabs, biopsy of perforation site, sutures (PDS), lavage and drainage
- Admitted to ICU postoperatively

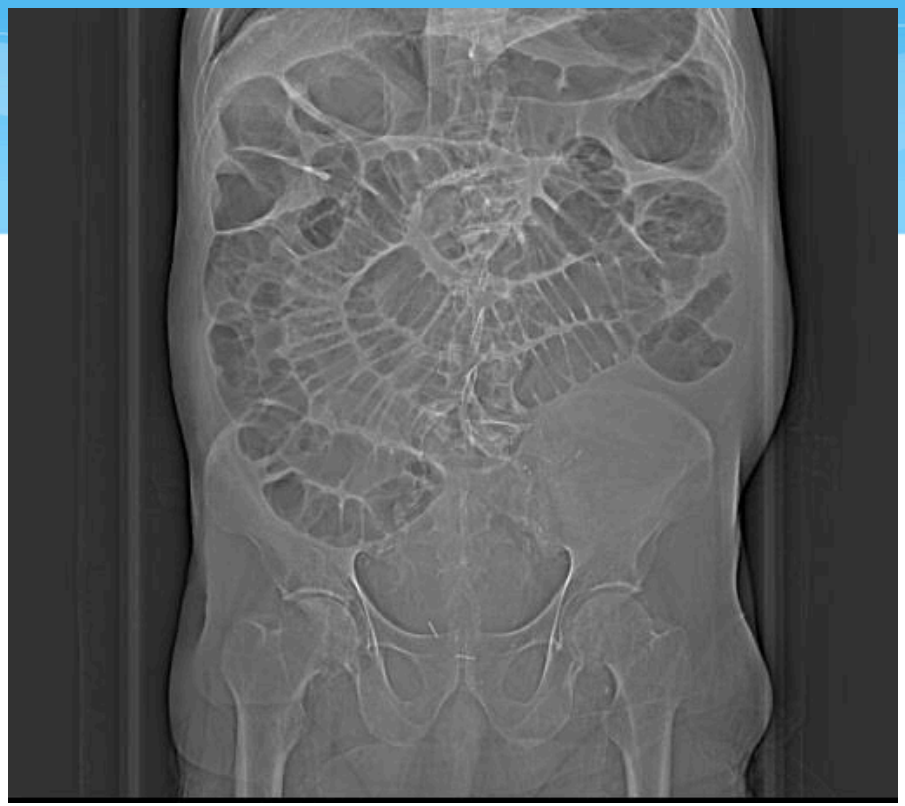
- Returned to ward the next day
- Postoperative course going well, no complications, nephrologist consulted before release
- Released on 8th postop. day

- Returned to emergency department 3 days after release
- Intense pain in the abdomen since yesterday, worsening
- No fever, vomiting or nausea
- Tender abdomen
- LAB: Lkc – 18.1, CRP – 189.2

- RTG: air-fluid levels, small bowell distension (29 mm), no pneumoperitoneum
- Diagnostics?
- Antibiotics?
- Surgery?



MSCT



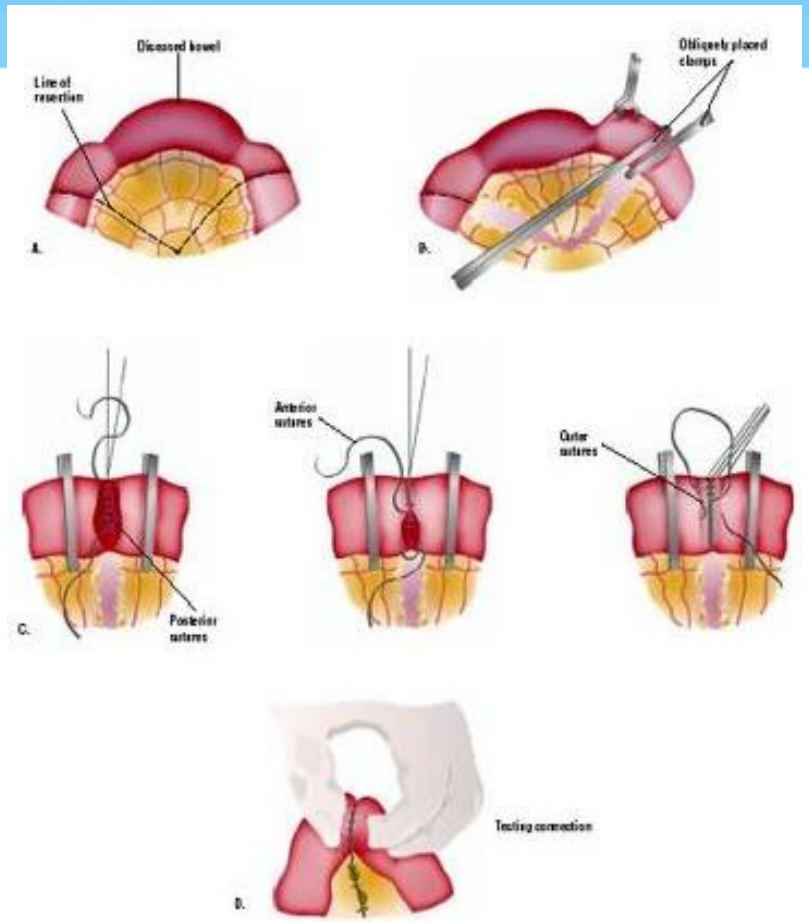
- Small bowel distension (44 mm), air-fluid levels, fatstranding
- No pneumoperitoneum
- site of opstruction – unclear

- Conservative treatment or surgery?

Second surgery

- Findings: small bowell perforation 3 cm distaly from the previousone,localperitonitis,noadhesions
- Site of perforation is 40 cm from ligament of Treitz

- Sutures?
- Resection and anastomosis?
- Jejunostomy?



- Senior surgeon was consulted –resection (20 cm including both perforation sites) and end to end anastomosis
- Lavage and drainage
- PHD: necrosis with acute peritonitis, ischaemic changes on one of the edges

Postoperatively

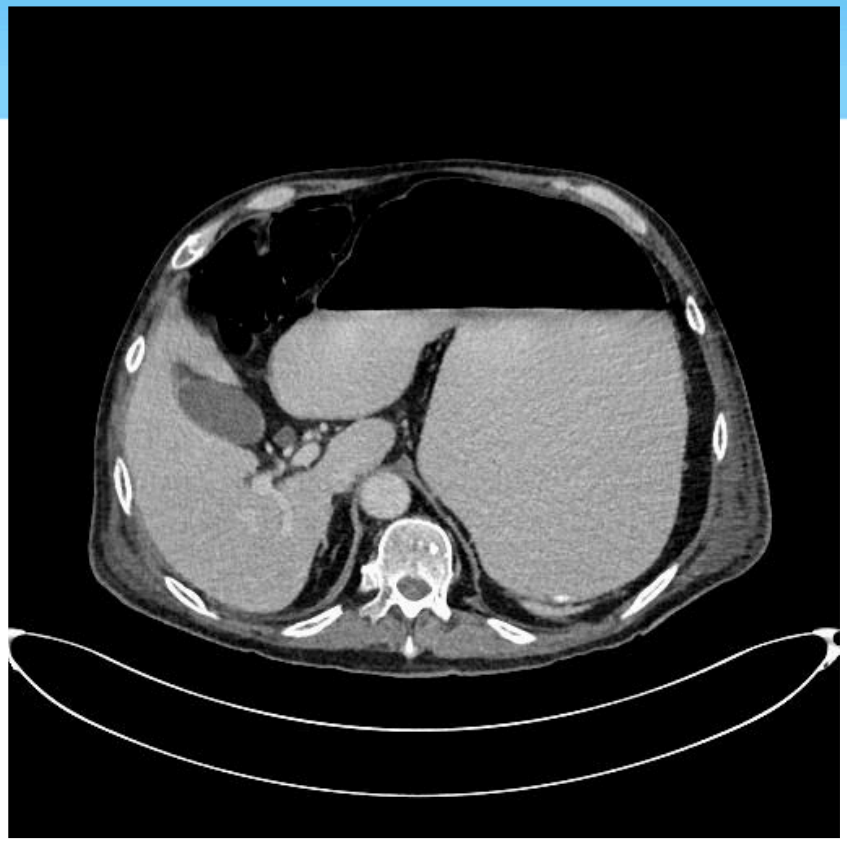
- Returned to ward, cefazolin (3x1 g) and metronidazole (3x500 mg) i.v.
- Consulted nefrologist (everolimus continued but in lower doses, azatioprin stopped, prednizon continued in normal dose (10 mg))
- LAB: decrease in Lkc (18.1 –10.5) and increase in CRP (274.3 – 189.2), Hb: 124 -115
- Good general condition, no fever

Two days later

- Abdominal pain
- LAB: Hb – 104,Lkc – 10.3,CRP– **602.5**

- **Change antibiotics?**
- **RTG?**
- **CT?**
- **Surgery?**

MSCT with oral contrast



- Distended stomach, diffusely distended small bowel with air-fluid levels
- No site of obstruction
- Fat stranding
- No extralumination of contrast

- Continued conservative treatment
- Cefazoline replaced with Meropenem, Metronidazole continued
- LAB: Lkc (10.3 –7.9 –7.0), CRP (602.5 –516 –302.2), Hb (104 –102 -103)
- Everolimus dose reduced by nephrologist, good renal function

- After 3 days – worse general condition, eneteral content in abdominal drains

What now??

- MSCT?
- Surgery?
- NG tube and NPO?

Third surgery

- Findings: diffuse peritonitis with enteral content filling the abdomen
- Ischaemia of the large part of small bowel distally from anastomosis with perforation on 3 sites

What to do?

- Resection of small bowel (proximal end 15 cm from Treitz and distal on ileum 60 cm from ileocecal valve) withhand sewnend toend anastomosisin onelayer
- Lavage and 2 drains

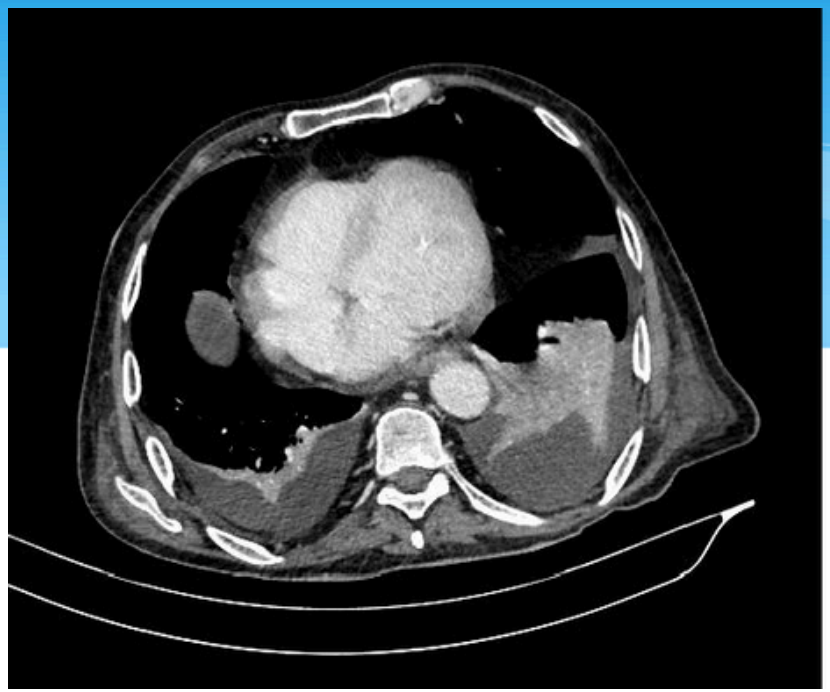
- Returned to ward postoperatively
- Antibiotics (Meropenem and Metronidazole)

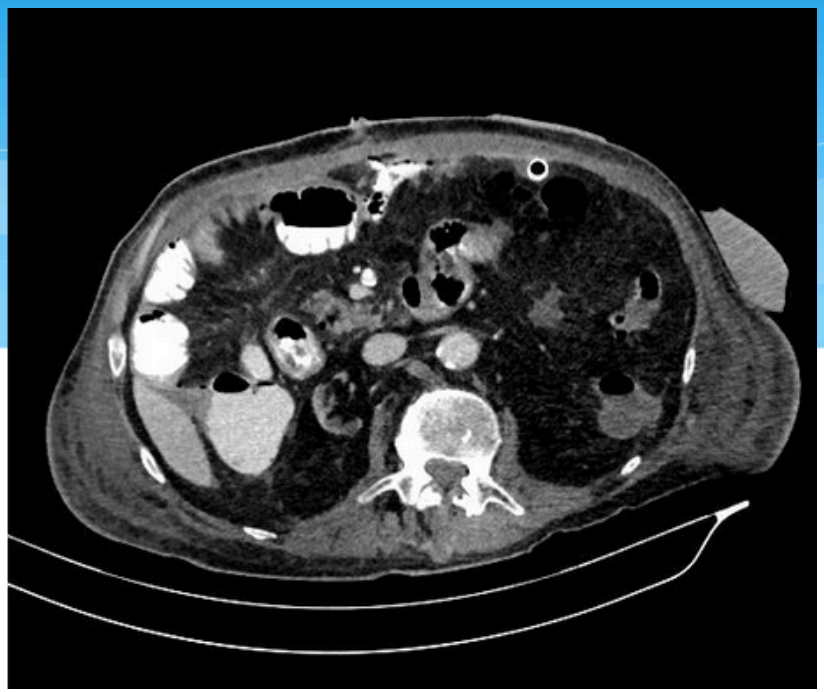
  continued, parenteral nutrition, NPO

- On ward –slow recovery
- LAB (3rdand 5thpostoperative day):

  Lkc (15.9 – 12.3), CRP (359.4 – 256.6), Hb (101-101)
- Good renal function

- Because of slow recovery and high leukocytes and CRP levels, on 5thpostoperative day another MSCT with oral contrast was done





- Progression of bilateral pleural effusion (27 and 38 mm)
- Extralumination of contrast
- Diffuse dense fluid, mesenterial fat stranding

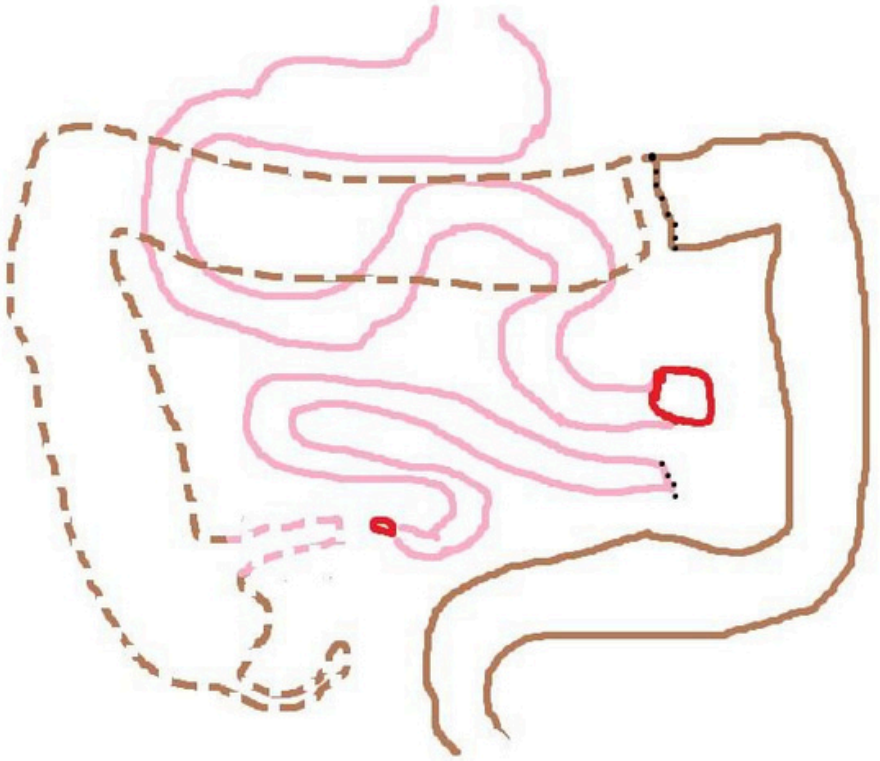
Fourth surgery

- Findings: diffuse peritonitis with pus
- Enteral content in the upper abdomen
- Perforation of enteral anastomosis (few mm in diameter)
- Ischaemia of right colon up to distal third of transversal colon with 2 mm perforation on cecum

Fourth surgery

- ***What to do now?***
  - Sutures?
  - Jejunostomy?
  - Resection with anastomosis?
  - Right hemicolectomy?

* Unipolar jejunostomy on proximal end of anastomosis
* Mucous fistula on terminal ileum
* Right hemicolectomy
* Microbiology swabs
* ICU postop.



- Th: Meropenem (9thday), Metronidazole (13thday), Mycamine (started after fourth surgery)
- 2nd postop. day: conscious, spontaneus breathing, hypotensive, good diuresis, afebrile
  Lkc: 4,6, CRP: 218,9
  everolimus discontinued, solumedrol 20 mg i.v.

- 3rd postop day: hemodynamically unstable, intubated, worsening renal function

  Microbiology results: Candida albicans, Klebsiella pneumoniae

  OXA-48, Acinetobacter baumanii, Staphylococcus aureus MRSA, Enterococcus faecalis

  Meropenem replaced by Teicoplanin, Unasyn (Ampicillin and Sulbactam), and Colystin

- 4th postop. day: critical, hemodynamically unstable with high vasoactive support, mehanically ventilated, anuric

  LAB: Lkc –10.4, CRP –386,8, PCT –71

- Died

  Haemoculture: K. pneumoniae OXA-48