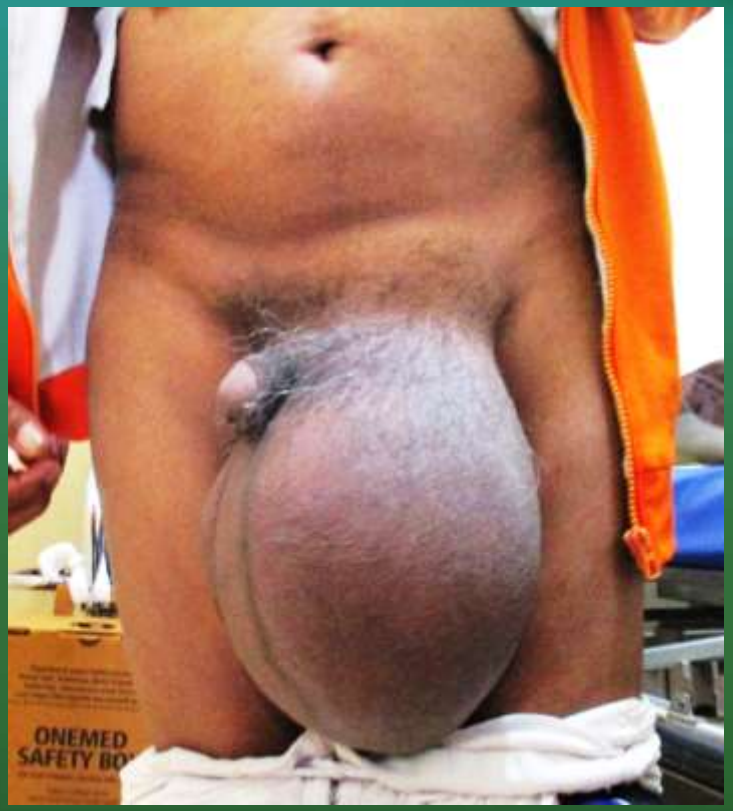
HERNIA



dr. Mochamad Aleq Sander, M.Kes., Sp.B., FINACS

Sertifikasi dosen: 12107102411578

Bagian SMF Ilmu Bedah – RS UMM

Fakultas Kedokteran – Universitas Muhammadiyah Malang

SEJARAH

1363 ------- Guy de Chauliac (master of medicine & bedah dari Perancis)

- pertama kali membedakan hernia inguinal & femoralis
- teknik reduksi dgn posisi trendelenburg

1556 ------- Pierre Franco

pakai alat khusus u/ memotong kantung hernia tanpa mengenai usus

1559 ------- Casper Stromayr

- publikasi buku teks mengenai hernia
- dibedakan hernia direk vs indirek
- tdk perlu memotong testis

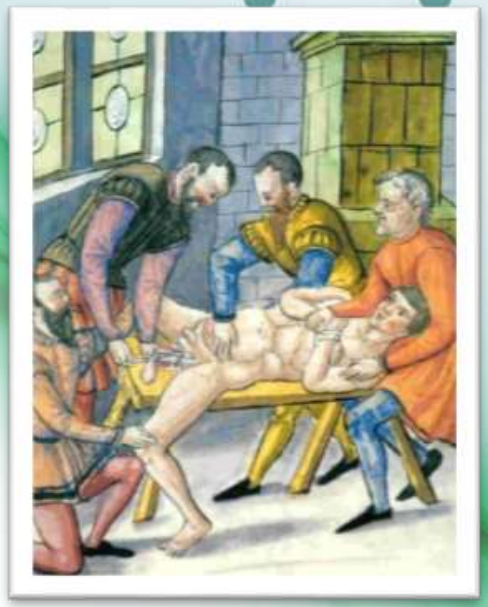
1865 ------- Joseph Lister

- antisepsis: awal pembedahan modern

1871 ------- Marcy (Amerika)

- teknik aseptik u/ operasi hernia
- pentingnya fascia transversalis & penutupan ring interna

SEJARAH



1884 ------ Edoardo Bassini (Itali)

- "*Father of Modern Herniorrhaphy*"
- splitting aponeurosis obliquus externus
- diseksi & rekonstruksi canalis inguinalis
- diseksi & ligasi kantung setinggi mungkin
- penjahitan ⇨ conjoined tendon & lig. Inguinale

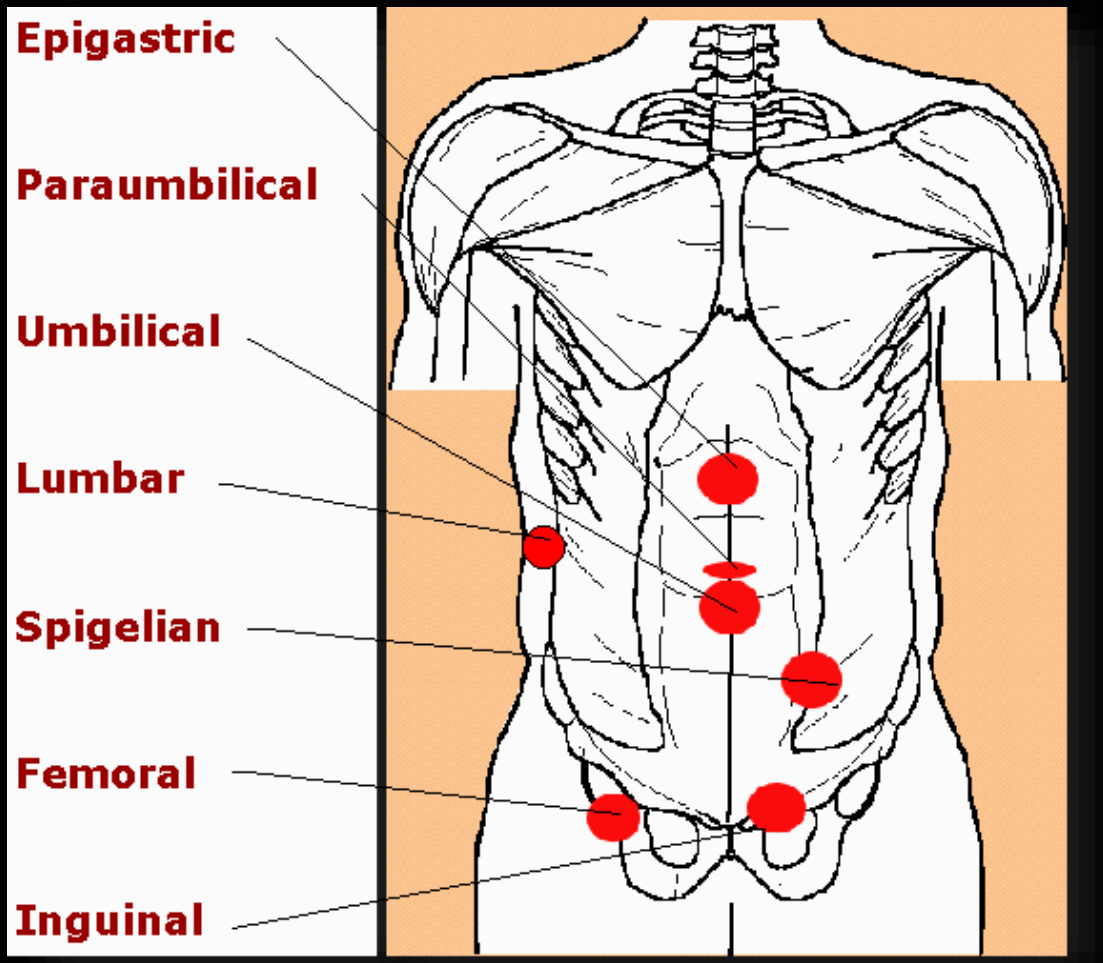
1953 ------ Shouldice

- multilayer repair ; angka rekurensi < 1%
- agak rumit, kadang perlu diseksi ekstensif

Akhir Abad 20

- Berliner, Lichtenstein, Gilbert, McVay
- "tension-free" , mesh-graft
- Ralph Ger (1982) ⇨ first laparoscopic hernia repair

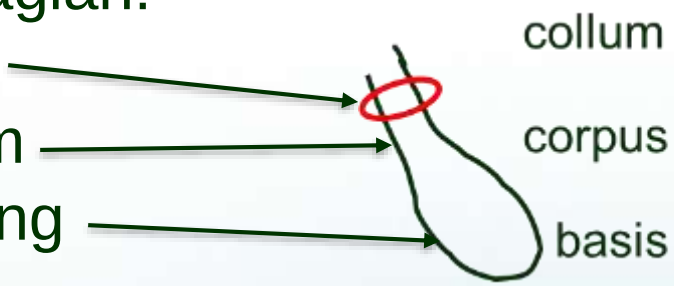
LOKASI TERSERING

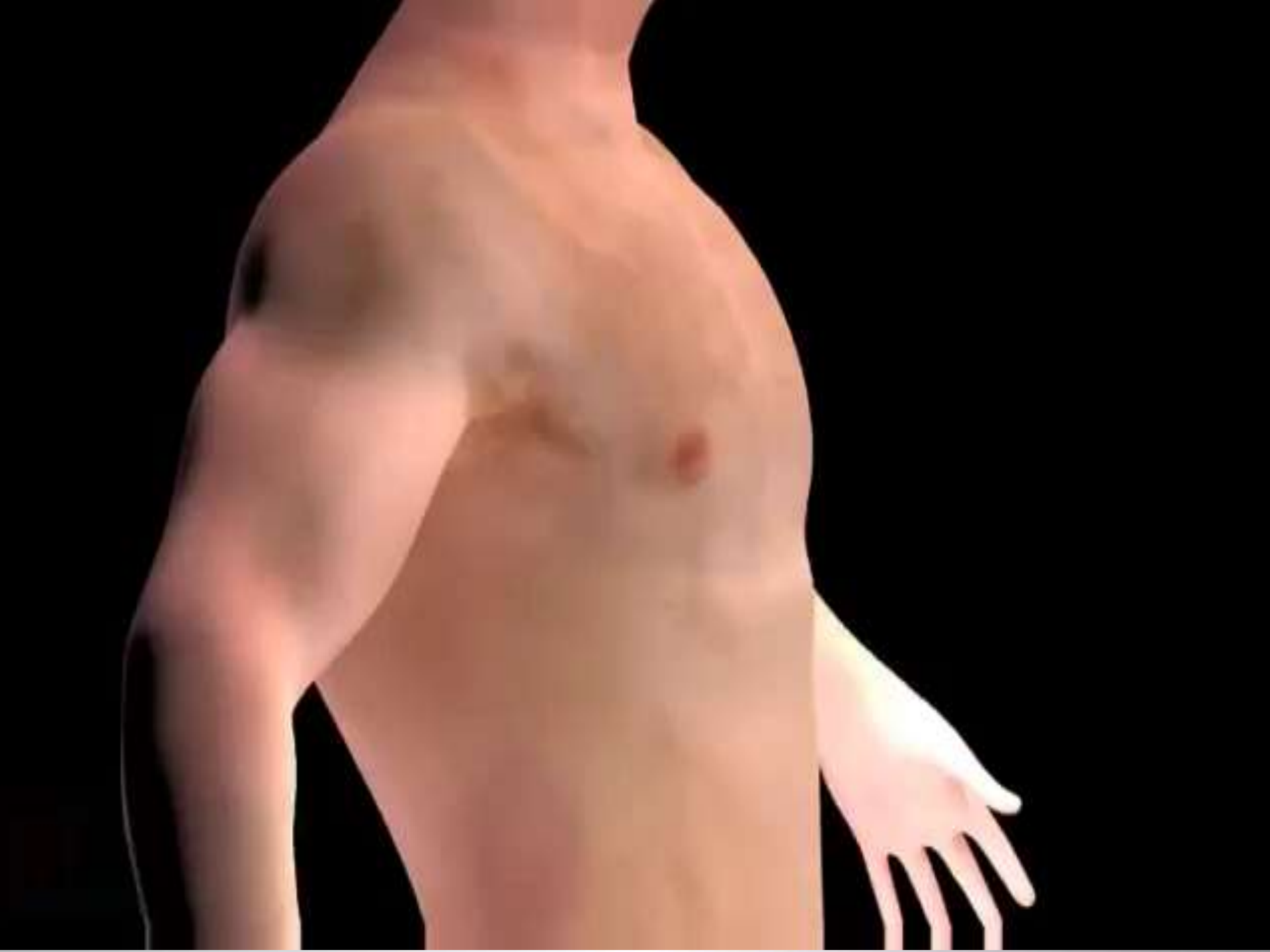


PENDAHULUAN

- Istilah “HERNIA”
  - Latin = robekan, Yunani = tunas
  - Penonjolan (protrusion) abnormal suatu organ intraperitoneal yg keluar dari rongga perut mll lubang (lokus minoris) & msh diliputi peritoneum

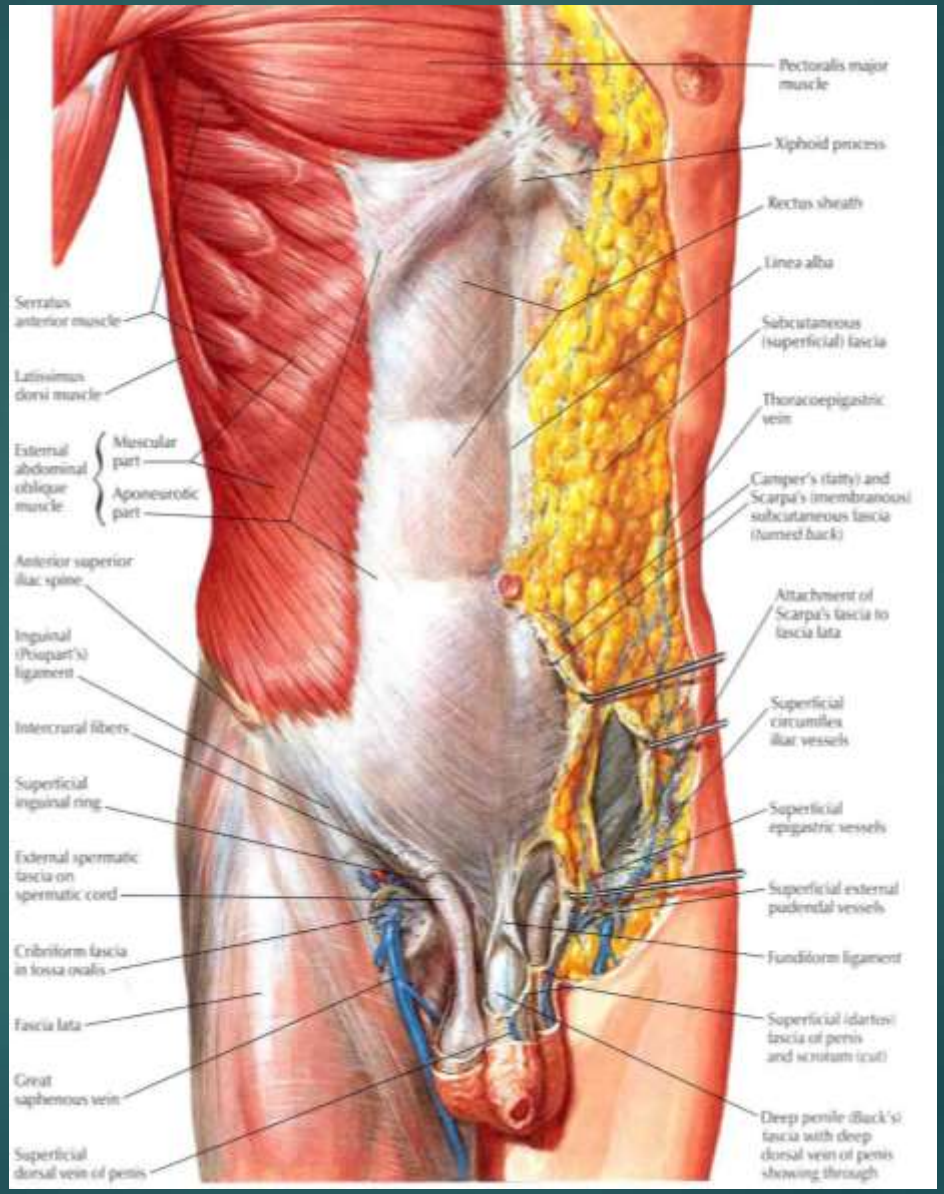
- Memiliki 3 bagian:
  1. Pintu
  2. Collum
  3. Kantung



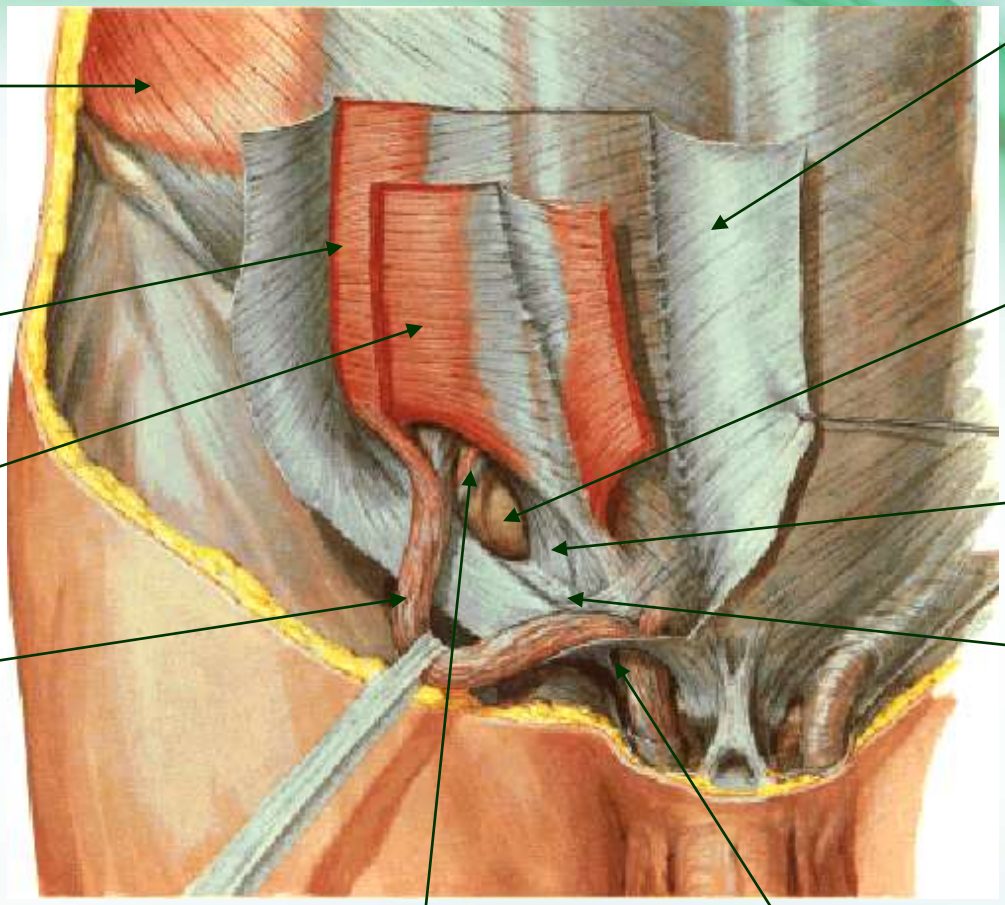



ANATOMI

REGIO INGUINALIS



REGIO INGUINALIS



External oblique m.

Internal oblique m.

Transversus abdominus m.

Cremaster (sperm. cord)

External oblique apon.

Transv. fascia

Conjoint tendon

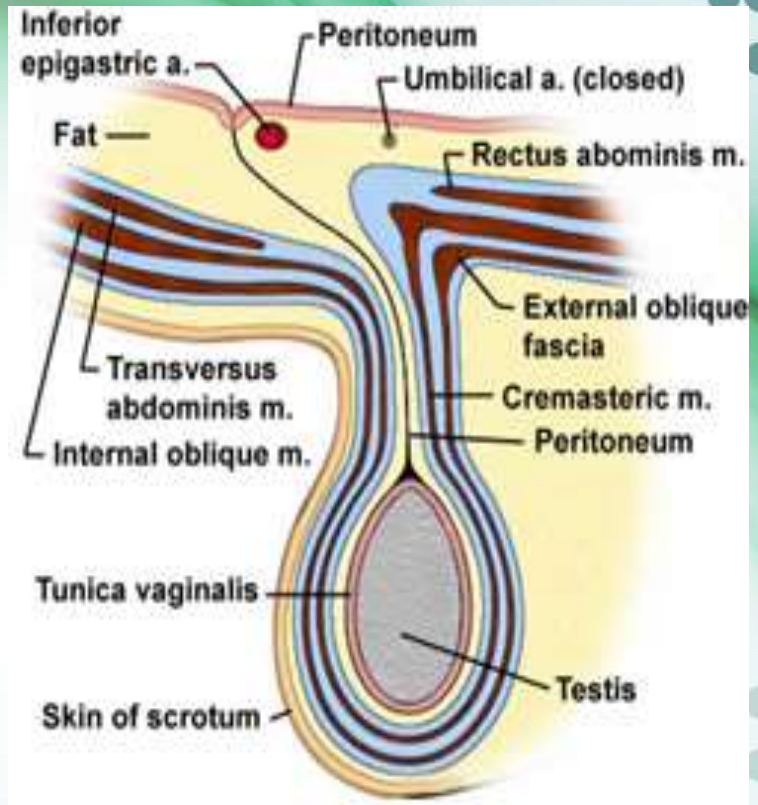
Cooper's ligament

Inferior epigastric vessels

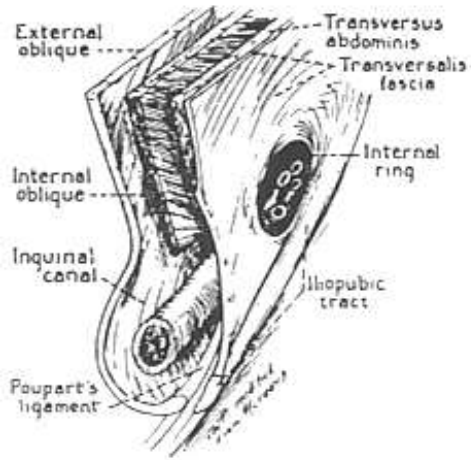
External inguinal ring

LAPISAN DINDING ABDOMEN

1. Peritoneum
2. Preperitoneal fat
3. Transversalis fascia
4. Transversus abdominis muscle
5. Internal oblique muscle
6. External oblique muscle
7. Subcutaneus fat
8. Skin

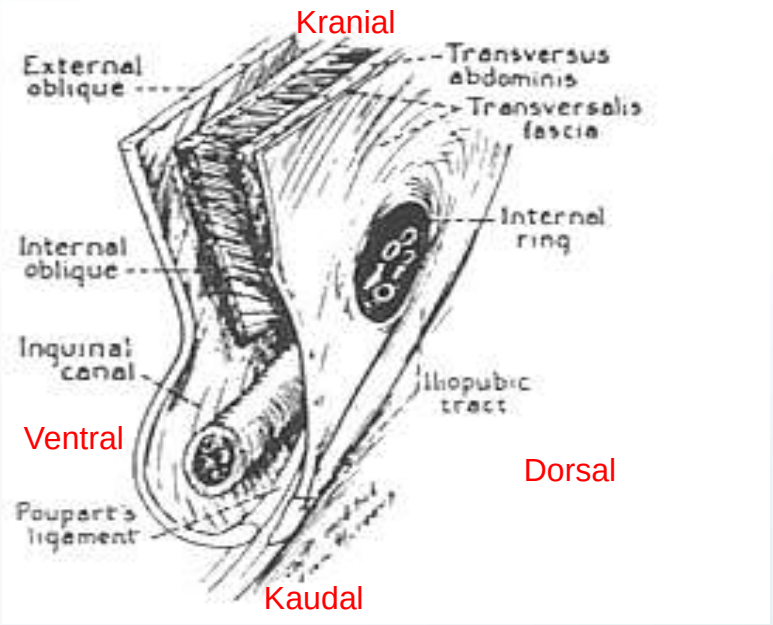


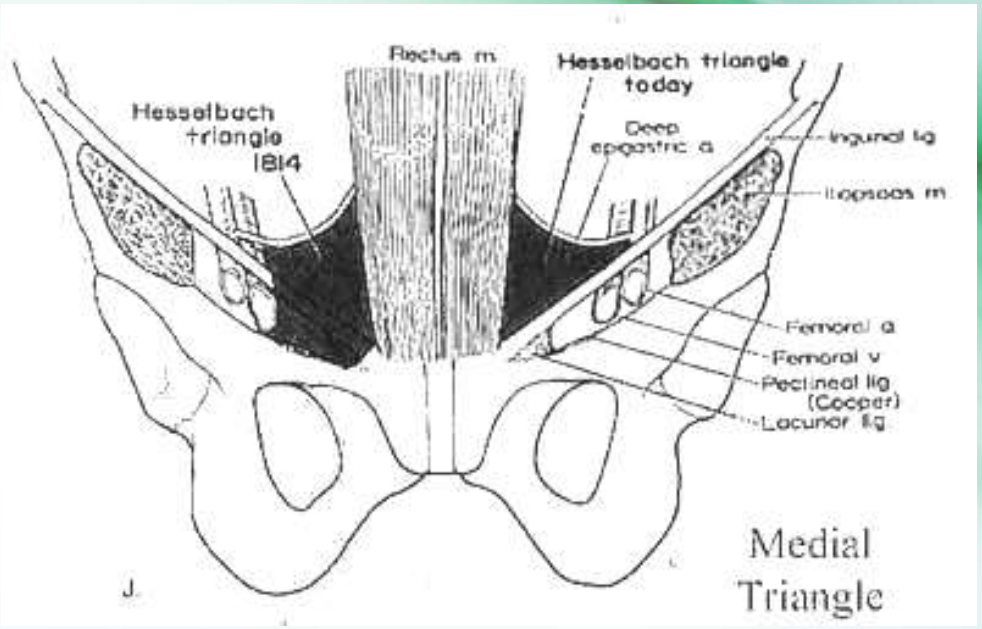
The Anatomical Entities of the Groin



BATAS CANALIS INGUINALIS

- Ventral : aponeurosis m. obliquus externus
- Dorsal : fascia transversa
- Kranial : conjoined tendon
- Kaudal : lig. Inguinale





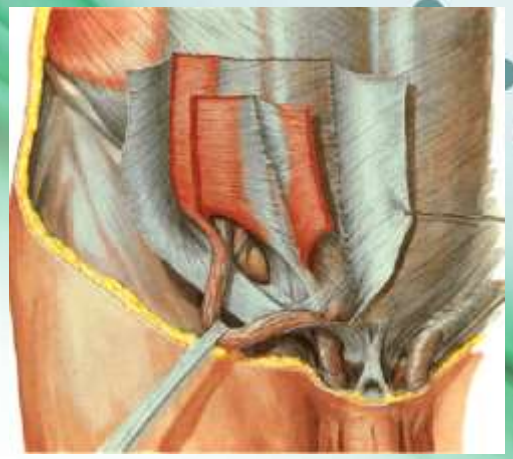
Isi Canalis Inguinalis:

♂ ⇨ funiculus spermaticus

♀ ⇨ lig teres uteri

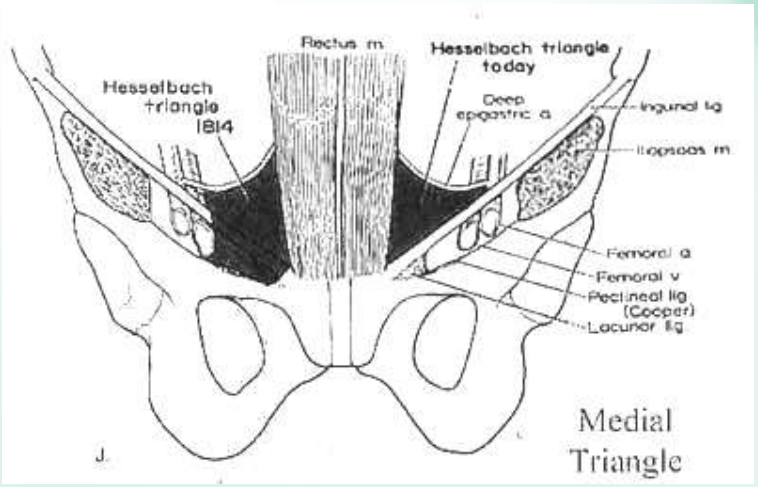
BATAS ANULUS INGUINALIS INTERNUS

- Lig. Inguinale
- Conjoined tendon
- Vasa epigastrika inferior



BATAS TRIGONUM HASELBACH

- Medial : tepi lat. M. Rectus Abdominis
- Lateral : Vasa epigastrika inferior
- Inferior : Lig. Inguinale



KLASIFIKASI HERNIA

A. BERDASARKAN LOKASI

1. **Eksterna**

   → kantung menonjol keluar dari dinding abdomen

   mis: - Hernia Inguinalis Lateral
   - Hernia Inguinalis Medial
   - Hernia Femoralis
   - Hernia Sikatrikalis
   - Hernia Umbilikalis

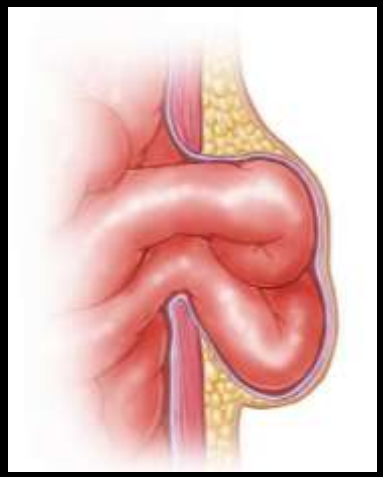
2. **Interna**

   → bila kantungnya tdpt di dlm rongga abdomen

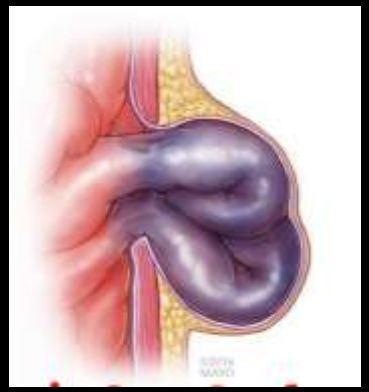
   mis: - Hernia Obturator
   - Hernia Diafragmatika
   - Hernia Foramen Winslowi
   - Hernia Lig. Treitz

B. BERDASARKAN SIFAT

1. **Reponibel** (Reducible)
   - tonjolan viskus dpt kembali ke dlm abdomen

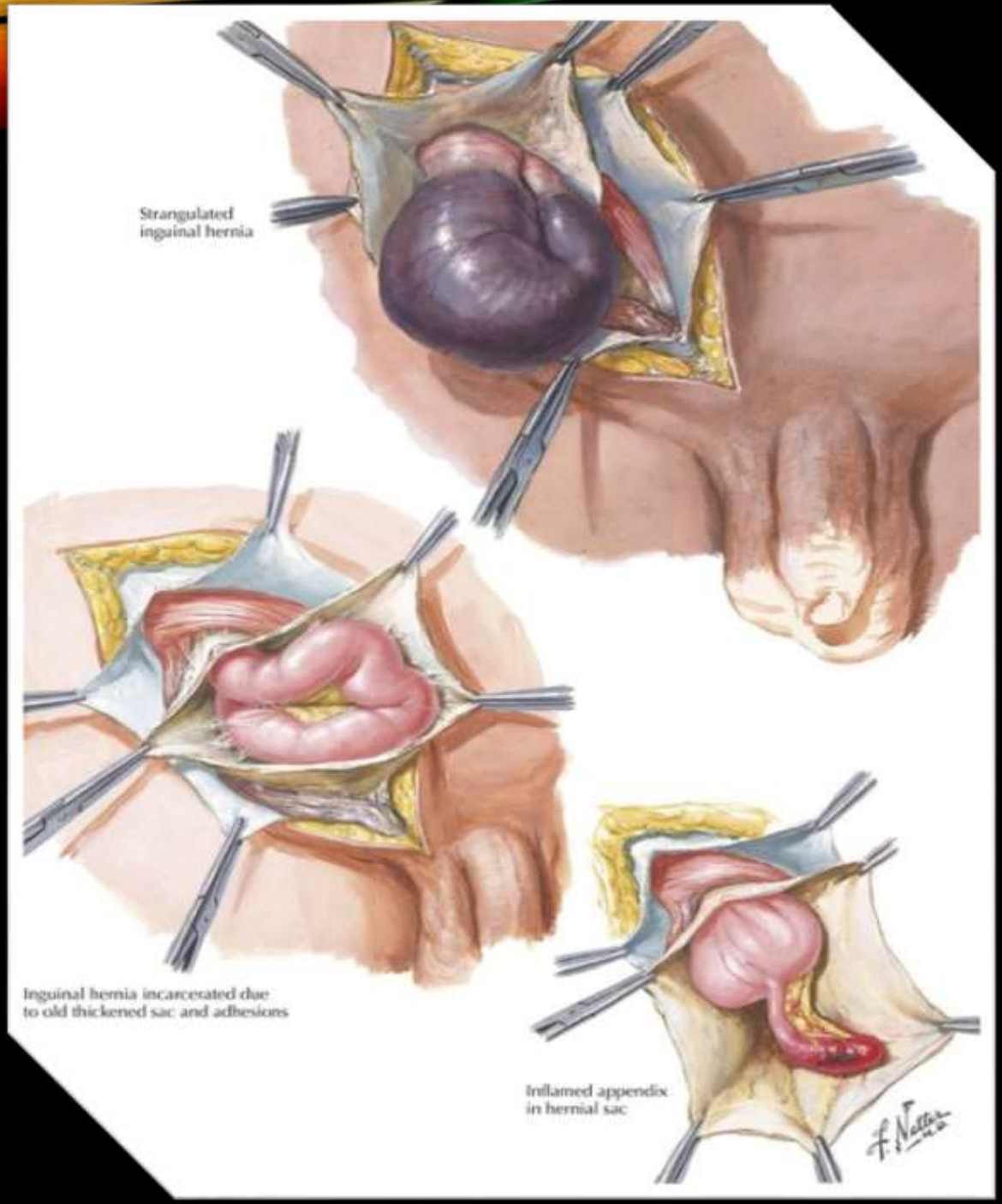


2. **Irreponibel** (Irreducible)
   - isi kantong hernia tak dpt kembali tanpa ggn passage / vascular
   - biasanya ada perlengketan



3. **Inkarserata**
   - irreponible disertai ggn passage
   - tjd mendadak ⇨ ileus

4. **Strangulata**
   - irreponible disertai ggn vascular
   - Gx: - nyeri daerah benjolan & hiperemis
     - kholik – muntah2 ⇨ ileus
   - Kadang2 usus nekrosis ⇨ perlu reseksi


Strangulated
inguinal hernia
Inguinal hernia incarcerated due
to old thickened sac and adhesions
Inflamed appendix
in hernial sac

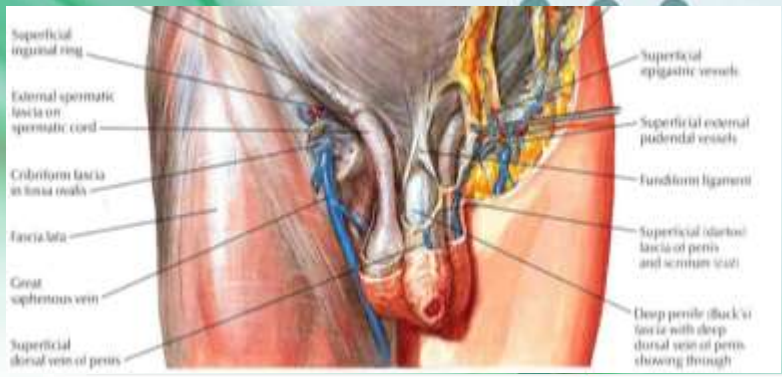
C. BERDASARKAN PINTU HERNIA DI REGIO INGUINAL

1. **Hernia Inguinalis Lateralis (HIL)**
   - Pintu terletak di anulus internus yg dibentuk o/:
     lig. Inguinale, conjoined tendon, & vasa epigastrica inferior
   - = Hernia Indirecta

2. **Hernia Inguinalis Medialis (HIM)**
   - Pintu terletak di trigonum Haselbach, dg batas:
     a. Medial : tepi lateral m. rectus abdominis
     b. Lateral : vasa epigastrica inferior
     c. Inferior : lig. Inguinale
   - = Hernia Directa

3. **Hernia Femoralis (HF)**
   - Pintu terletak di anulus femoralis, yg dibentuk o/: lig. Inguinale, lig. Lacunare, vasa femoral, dan fascia pectinea

D. BERDASARKAN ISI



Hernia Komplit

⇨ kantong HIL menonjol sampai diluar anulus externus

Hernia Inkomplit

⇨ kantong HIL belum sampai diluar anulus externus

Hernia Litre

⇨ hernia yg isi kantong suatu divertikel meckel

Hernia Richter

⇨ isi kantong sebagian dari dinding usus

Maydl Hernia

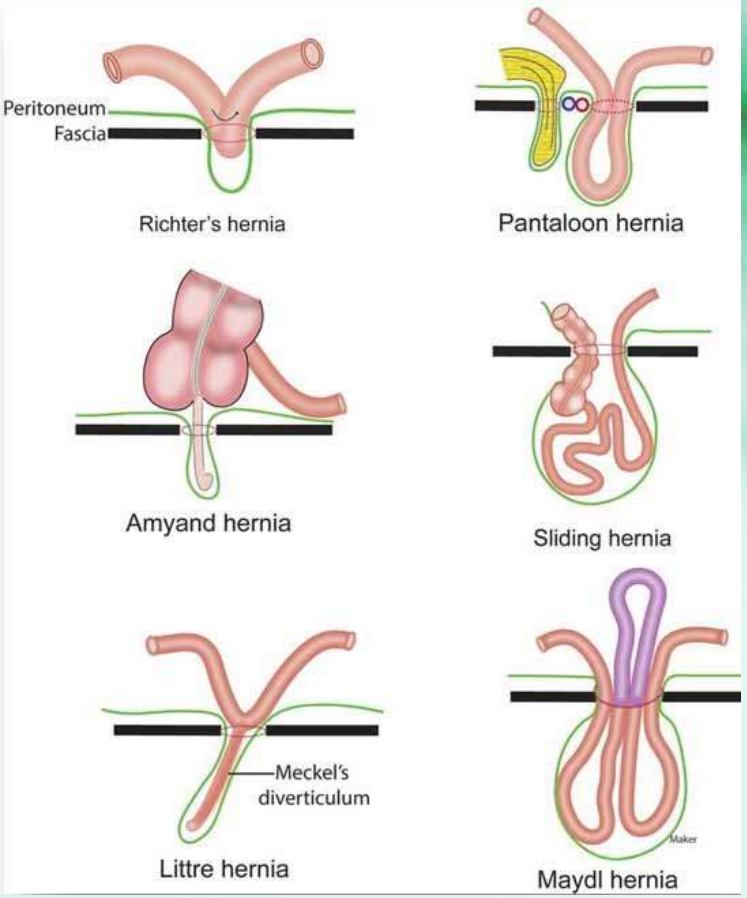
⇨ hernia inkarserata dimana usus yg terjepit berbentuk W

Sliding Hernia

⇨ isi kantong yi organ2 retroperitoneal (cecum, buli dll)

Pantaloon Hernia

⇨ tdpt HIL & HIM scr bersamaan pada sisi yg sama



INSIDENS

Pada anak-anak:

1. 10–20 / 1000 kelahiran hidup
2. ♂ : ♀ = 4 : 1
3. Mayoritas indirecta, directa <1%
4. Bayi prematur ⇨ 7–10 %

Pada orang dewasa:

1. Angka kejadian = 10–15%
2. ♂ : ♀ = 7-25: 1
3. usia 25–40 thn ⇨ 5–8%
4. usia ≥ 75 thn ⇨ ≥ 45%

INSIDENS

Hernia Ing. Lateralis (HIL)	60%
Hernia Ing. Medialis (HIM)	15%
Hernia Umbilicalis	10%
Hernia Femoralis	8%

Kesimpulan ⇨ 75% hernia terjadi di groin (lipat paha)

KLASIFIKASI HERNIA

Menurut ***Nyhus***:

1. Tipe 1 = HIL dg ukuran cincin interna yg normal
2. Tipe 2 = HIL dg ukuran cincin interna yg melebar
3. Tipe 3A = HIM dg kelemahan dinding posterior
4. Tipe 3B = HIL dg kelemahan dinding posterior
5. Tipe 3C = Hernia femoralis
6. Tipe 4 = Hernia rekurens

Menurut ***Gilbert***:

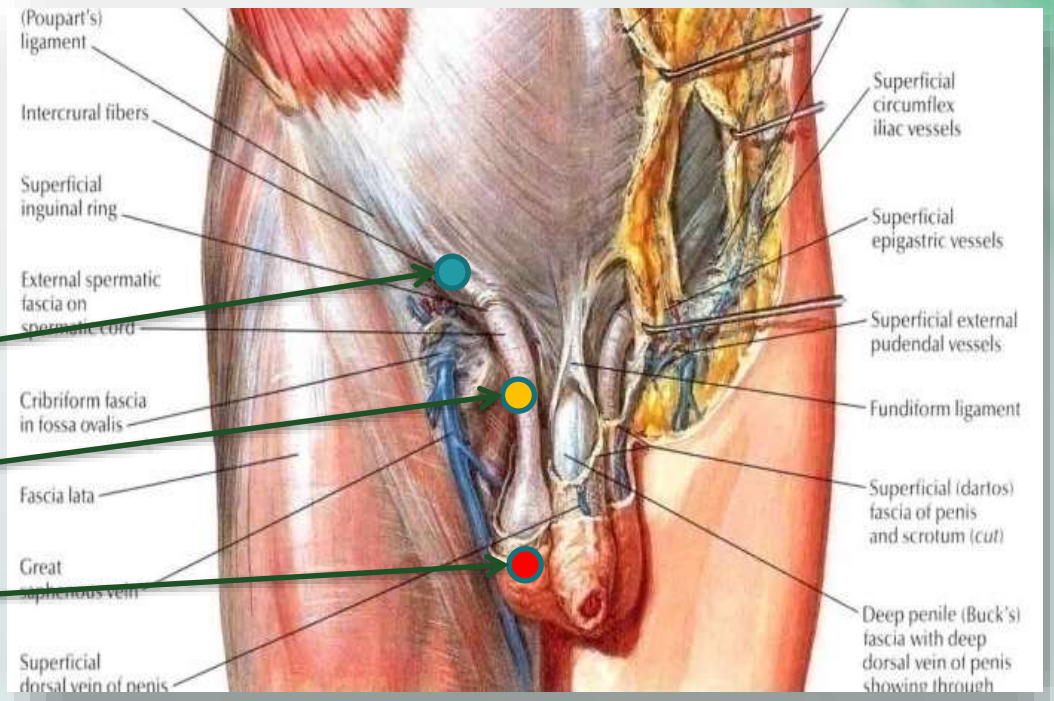
- Tipe 1 : kantung masuk ke ring interna yg intak <1 cm, ddg posterior intak.
- Tipe 2 : ~ tipe 1 tp ring interna 1-2 cm, ddg posterior intak, tipe >>.
- Tipe 3 : ~ tipe 2 tp ring interna >2 cm (2 jari), biasanya berisi usus.
- Tipe 4 : kelemahan ddg posterior menyeluruh, ring interna intak, kantung (-)
- Tipe 5 : Hernia rekurens /*primary diverticle hernia* , kantung (-), ring interna intak, biasanya mrpk gabungan dari tipe 2 & 4.

GRADASI HERNIASI

Grade 1 : herniasi meluas dari ring inguinal internal ke ring externa (di canalis inguinalis)

Grade 2 : herniasi melewati ring inguinal externa tapi tdk sampai scrotum (di supra scrotal)

Grade 3 : herniasi sampai scrotum (di scrotal)



PATOFISIOLOGI

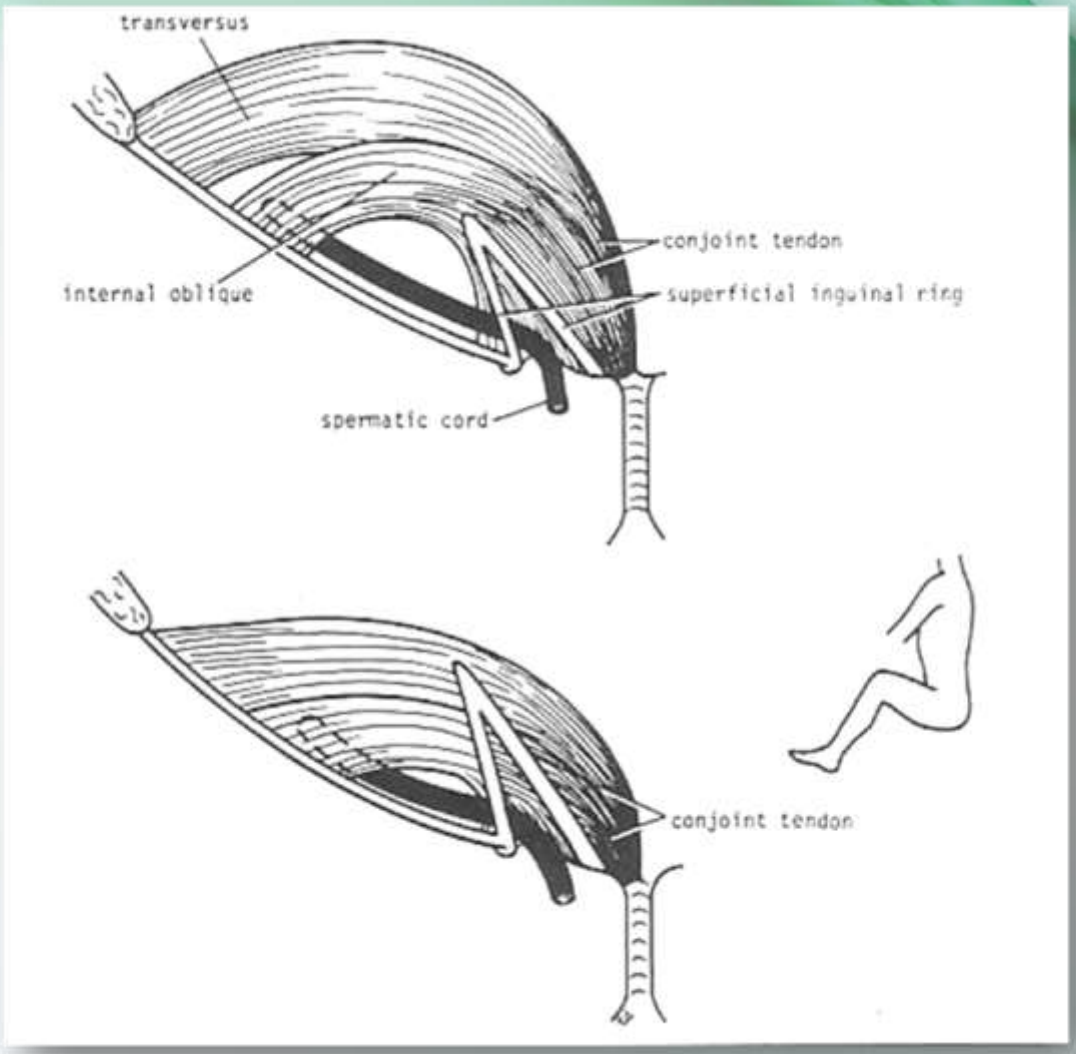
3 faktor penting yg saling mempengaruhi:

1. Patent processus vaginalis (preformed sac)
2. Pe↑ tekanan intra abdomen yg berulang
3. Kelemahan otot & jaringan ikat daerah abdomen

Pe↑ tekanan intra abdomen kronis/akut:

1. Aktivitas fisik >>
2. Konstipasi
3. Batuk kronis
4. Ggn berkemih obstruktif (BPH, stricture uretra, dll)
5. Kehamilan multipel

MEKANISME SHUTTER



MANIFESTASI KLINIS

- Puncak ⇨ bayi, dewasa 40-60 thn
- Pekerjaan ⇨ angkat berat
- Gejala lokal:

  benjolan hilang timbul (timbul saat beraktifitas & hilang saat berbaring) s/d menetap, rasa tdk enak, nyeri

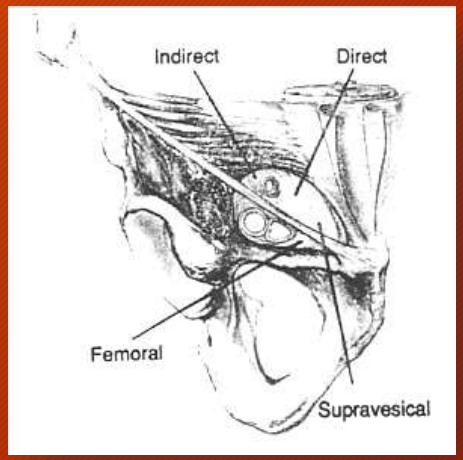
- Gejala sistemik: gejala kardinal obstruksi

  muntah, kolik abd, distensi abd, konstipasi ⇨ (VPDO)

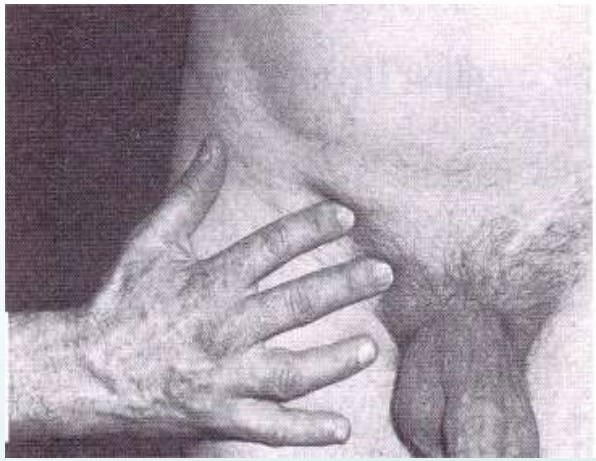
PEMERIKSAAN FISIK

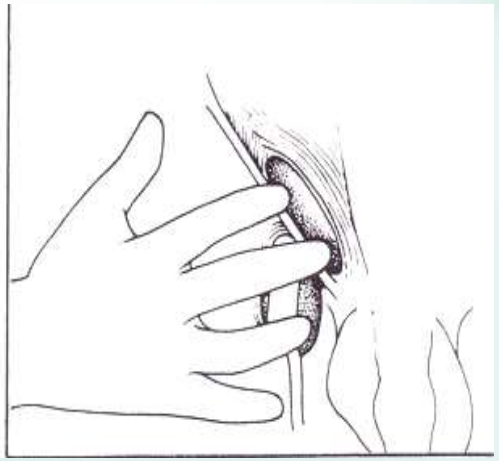
Inspeksi:

1. **HIL** ⇨ bentuk lonjong, diatas lig. inguinale s/d skrotum, kembalinya lambat
2. **HIM** ⇨ bentuk oval, diatas lig. inguninale pd (Trigonum Hasselbach), kembalinya cepat
3. **HF** ⇨ bentuk oval, dibawah lig. inguinale di fosa ovalis, keluarnya lambat

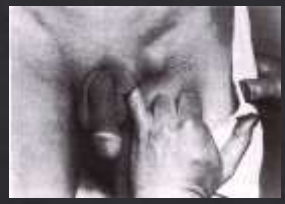


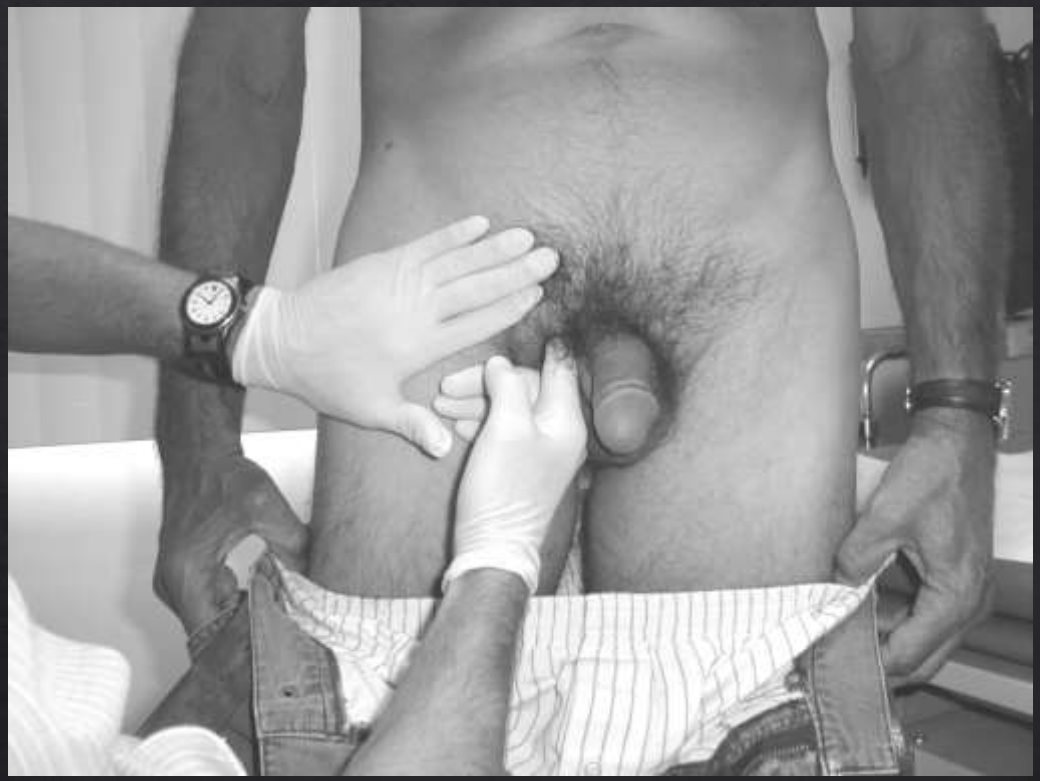
ZIEMANN TEST



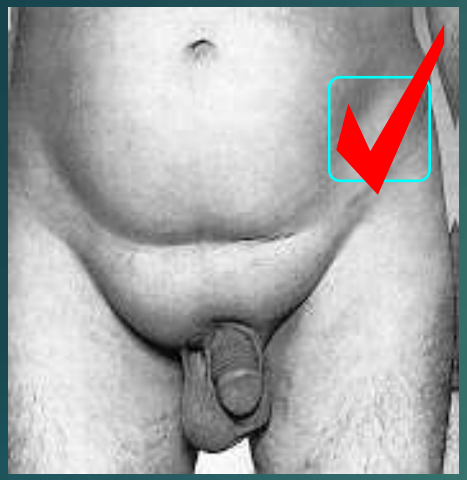


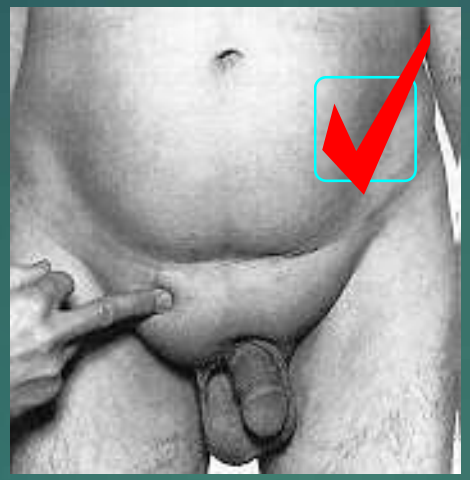
FINGER TEST

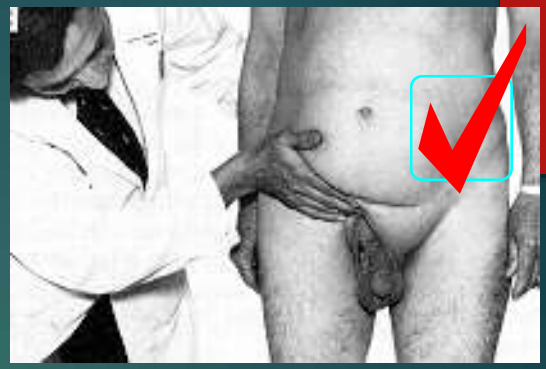




PEMERIKSAAN FISIK







- Posisi
- Suhu
- Nyeri
- Ukuran
- Bentuk
- Keregangan
- Komposisi (padat, gas, cair)
- Perubahan dengan batuk

THUMB TEST

Jari pemeriksa menutup cincin interna & Px diminta melakukan manuver valsalva:

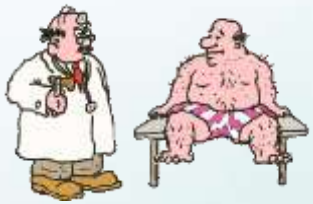
1. Tidak ada penonjolan = HIL
2. Terdapat penonjolan = HIM

HERNIOGRAPHY

- Injeksi 50 cc *water soluble* kontras intra peritoneum
- Posisi Px pronasi, pelvis lebih rendah dari kepala
- Manuver valsalva
- Sensitivitas 97%, Spesifisitas 98%

ULTRASONOGRAPHY

- Non invasif ; *real time*
- Mampu membedakan kondisi inkarserasi / strangulasi ⇨ doppler
- Alat bantu reduksi manual & monitoring pasca reduksi
- Annals of Royal College of Surgeons England (2003; 85; 178-180)
  1. Hernia femoralis (100%)
  2. Hernia directa (Sensitivitas 86% & spesifisitas 97%)
  3. Hernia indirecta (Sens. 97% & spesf. 87%)



DIAGNOSIS BANDING

1. Hernia femoral
2. Hydrocele comunicantes
3. Hydrocele non comunicantes
4. Undescended testis
5. Lipoma of the cord
6. Limfadenopathy

PENATALAKSANAAN

Indikasi Operasi:

⇨ Semua hernia inguinalis!

- Risiko membiarkan hernia berlanjut ⇨ Irreponible ⇨ Inkarserata ⇨ Strangulasi dg segala akibatnya
- Adanya penyulit medis lain ⇨ bukan alasan tdk menjalani operasi hernia

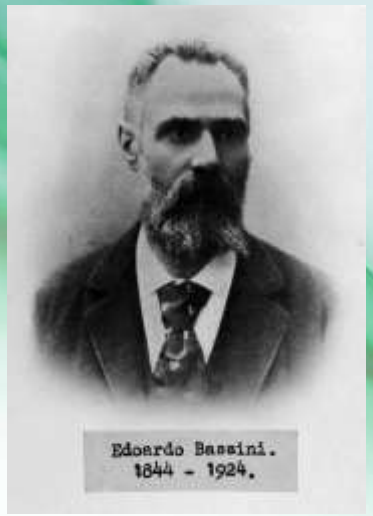
Jenis Operasi:

⇨Herniorrafi (pd dewasa)

⇨Ligasi tinggi / herniotomi (pd anak-anak)

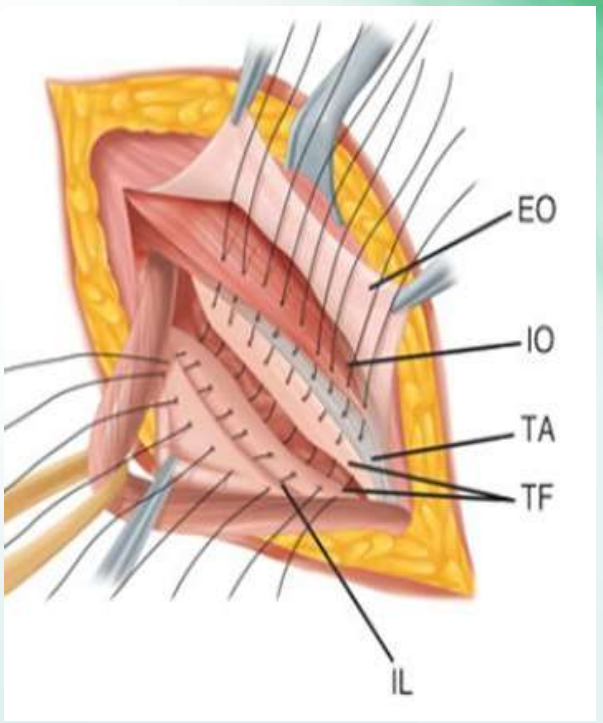
TEKNIK MANA YANG TERBAIK

Edoardo Bassini, 1880
Father of Modern Herniorrhaphy



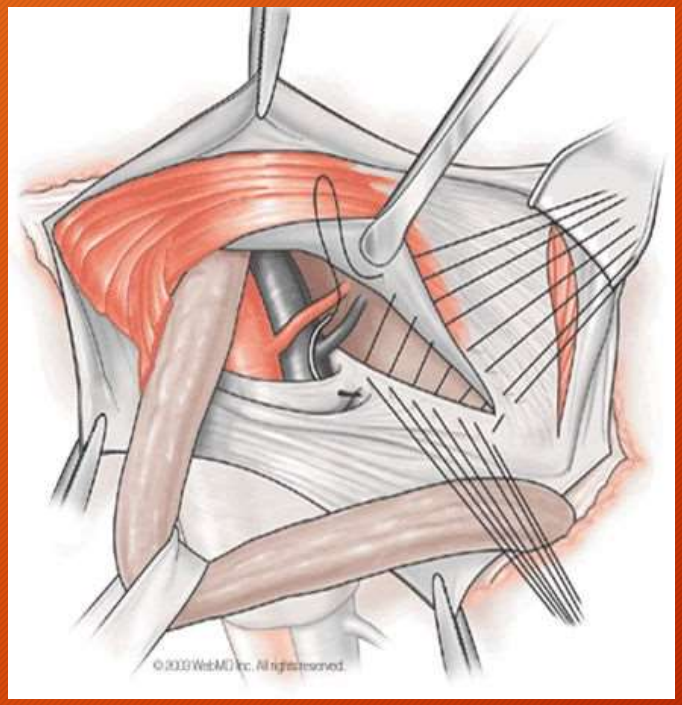
- = tension repair
- Aproksimasi: - m. Obliqus internus (IO)
  - m. Transversus abd (TA)
  - fascia transversalis (TF)

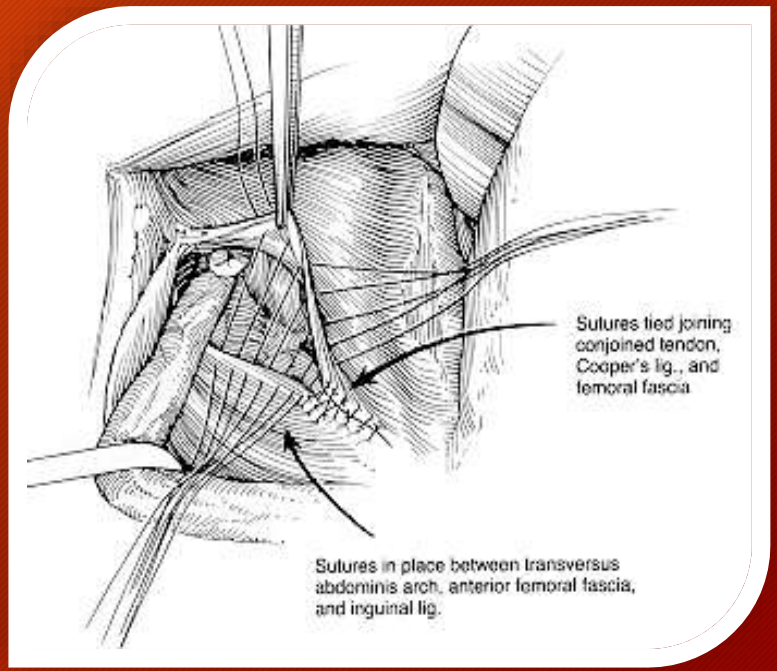
    dengan
  - tractus iliopubic
  - lig. Inguinale (IL)
- Jahitan interrupted



Chester B McVay, MD, PhD (1940)

- = Coopers ligament repair
- Aproksimasi: lig. Cooper & lig. Inguinale



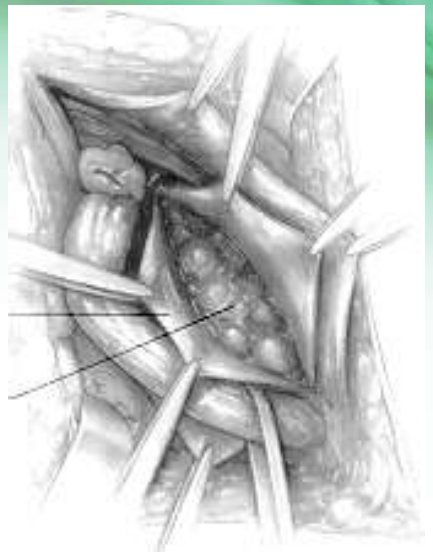


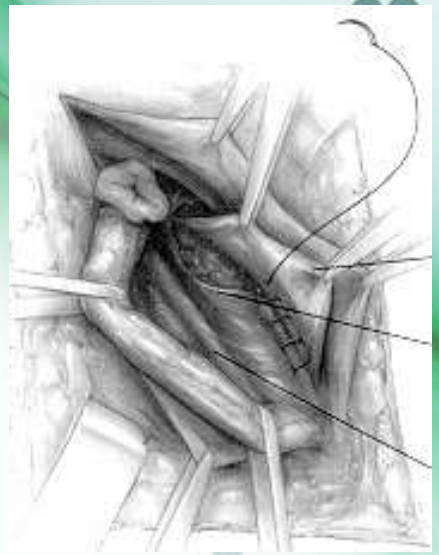
EE Shouldice (1945)

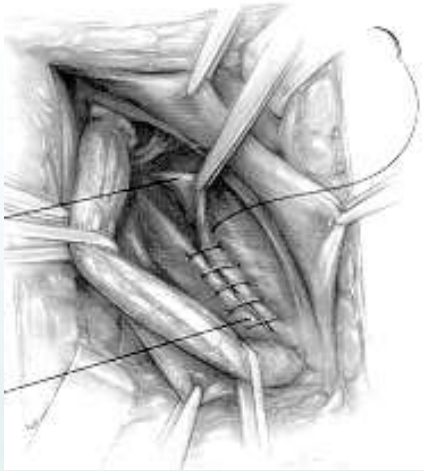
- Multilayered Bassini operation (yi: jahitan continuous bbrp lapis)
- = pure tissue technique
- Aproksimasi: - ujung lateral m. Rectus abd.
  - m. Obliqus internus
  - fascia transversalis

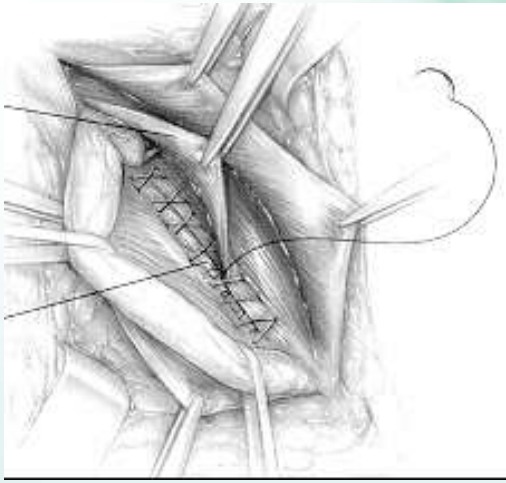
  dengan

  - tractus iliopubic
  - ujung lig. inguinale



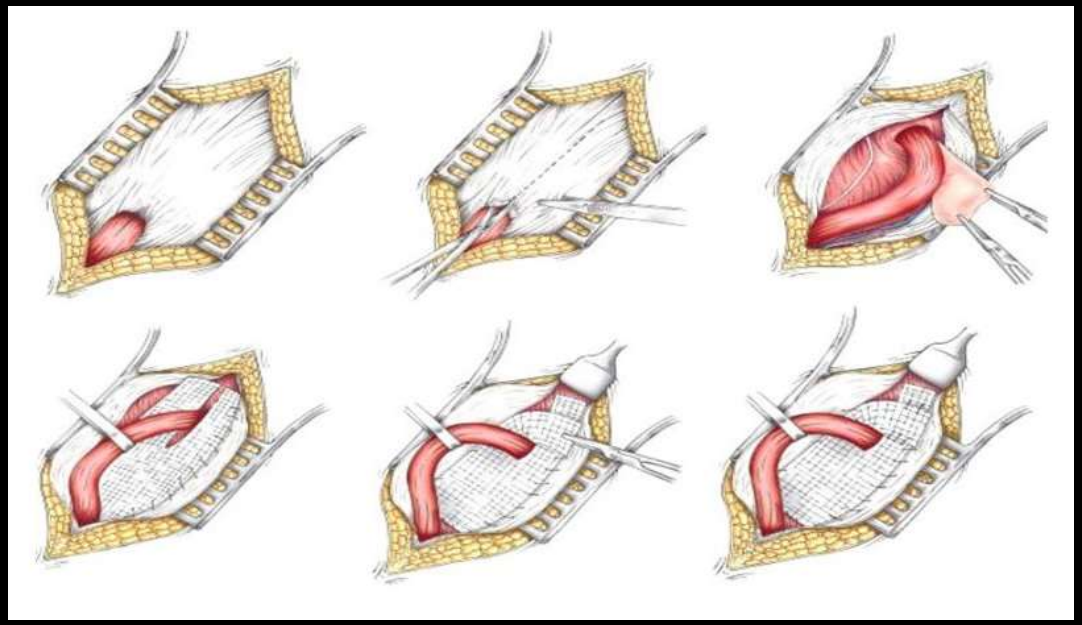


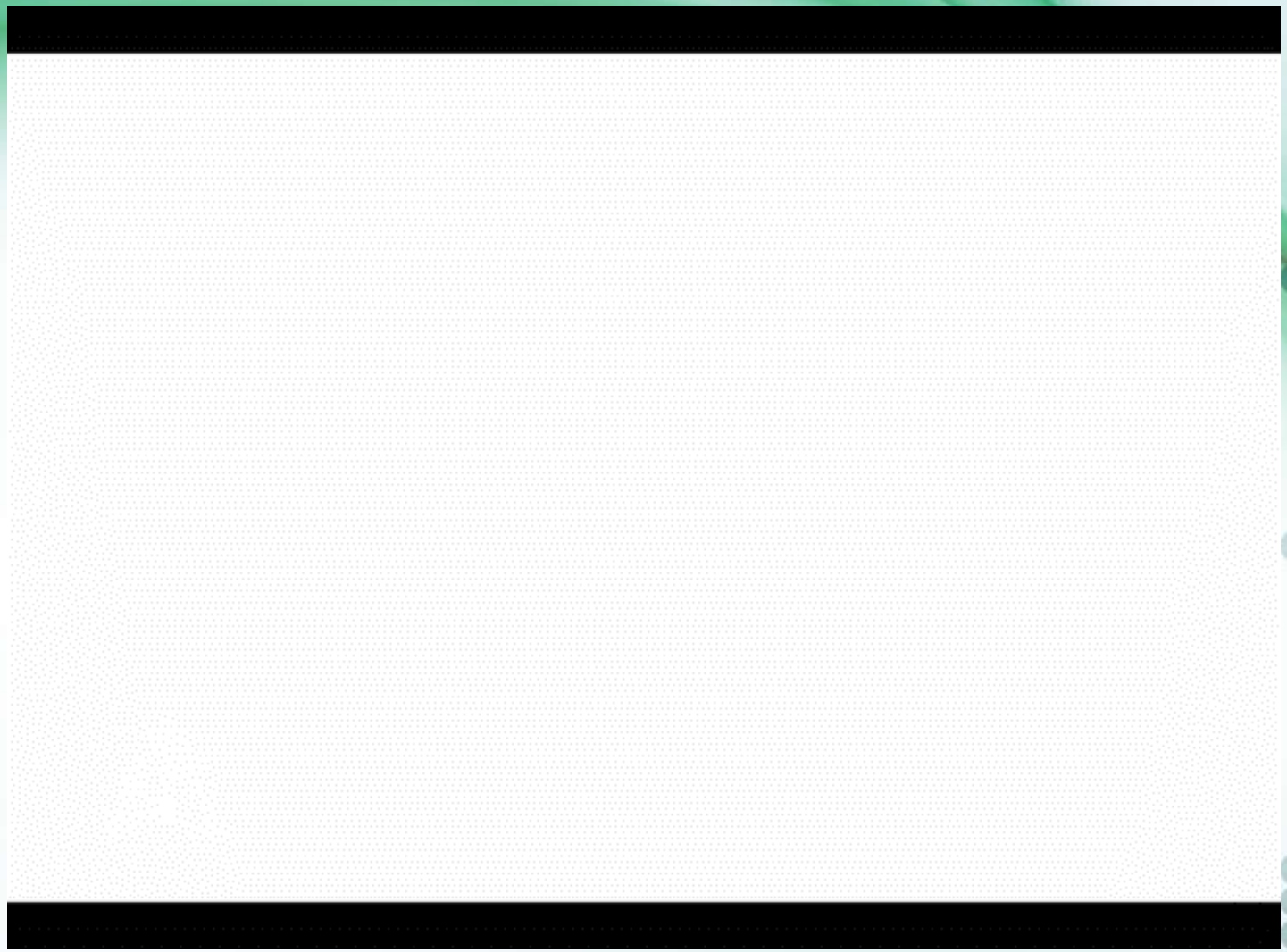




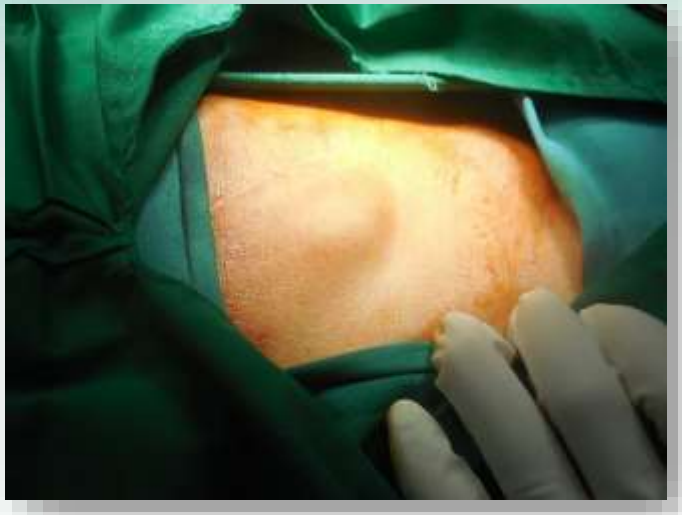
IRVING L LICHTENSTEIN, 1986
"TENSION FREE HERNIA REPAIR"

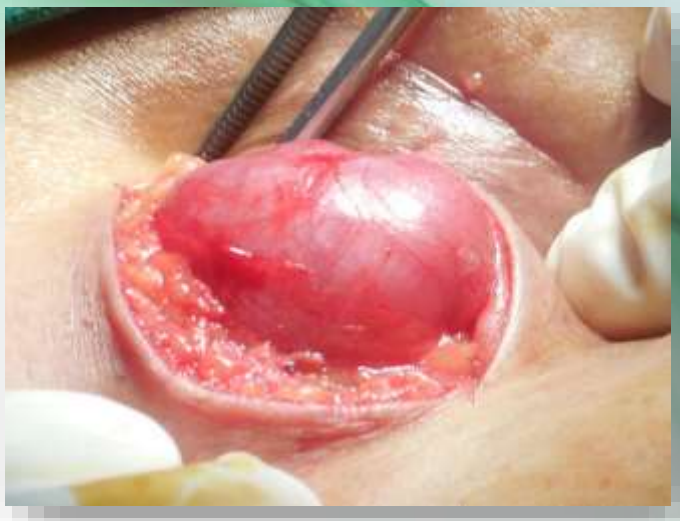
- Pakai "prostetic mesh" u/ menyokong fascia transversalis yg membentuk lantai inguinalis
- Keuntungan:
  1. rekurensi rendah (0,05%)
  2. tidak nyeri
- Kerugian : benda asing ⇨ trigger infeksi

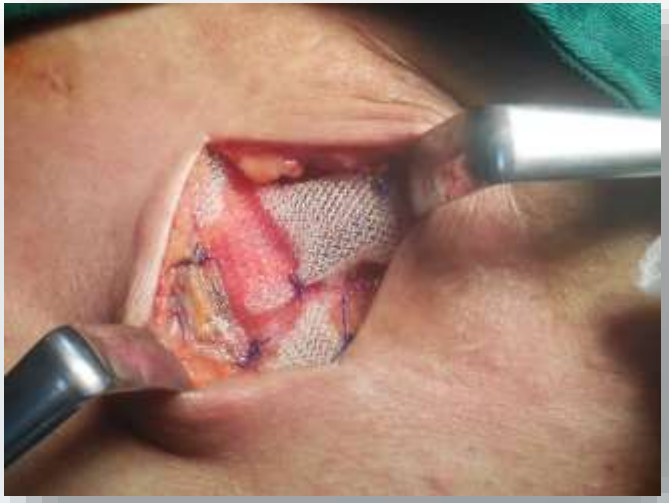




HERNIA VENTRAL
(Post Appendectomy 7 bln yl)
"tension free hernia repair"



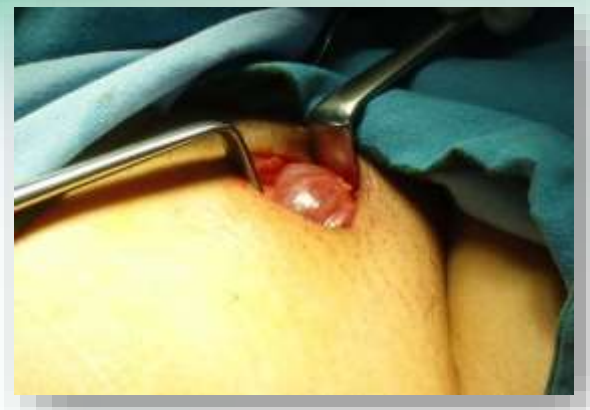


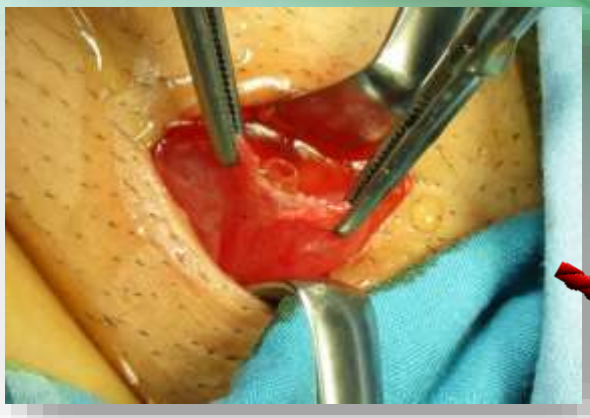


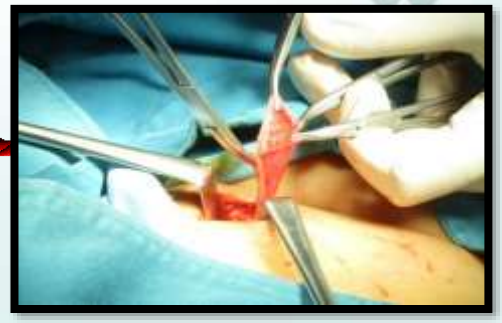
HERNIA INGUINALIS MEDIALIS

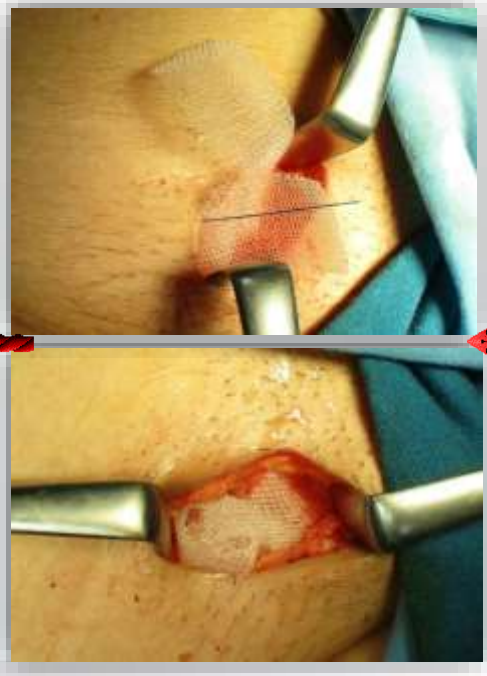
(♀ 35 thn – pekerjaan berat)

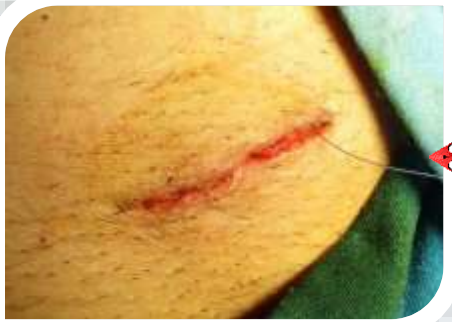
"tension free hernia repair"







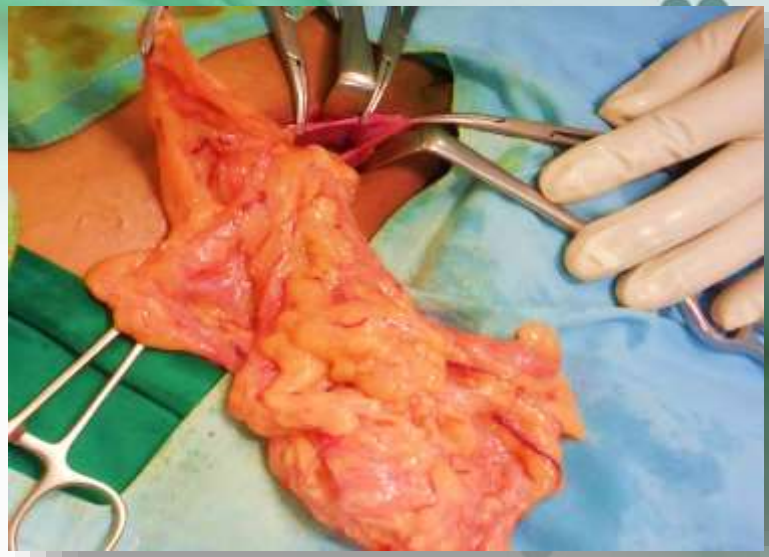


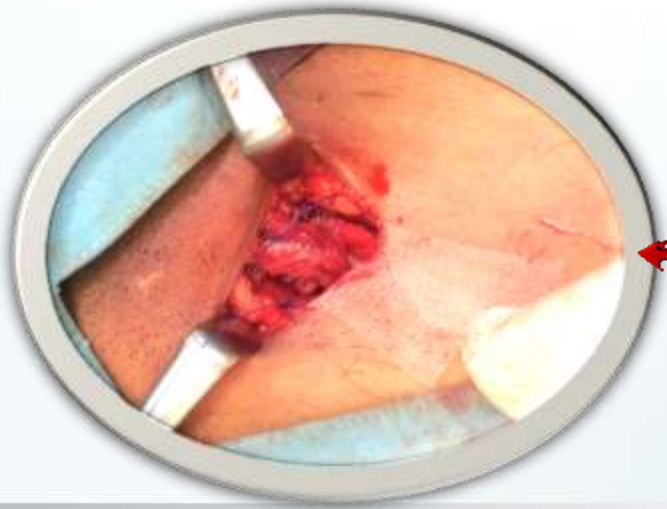


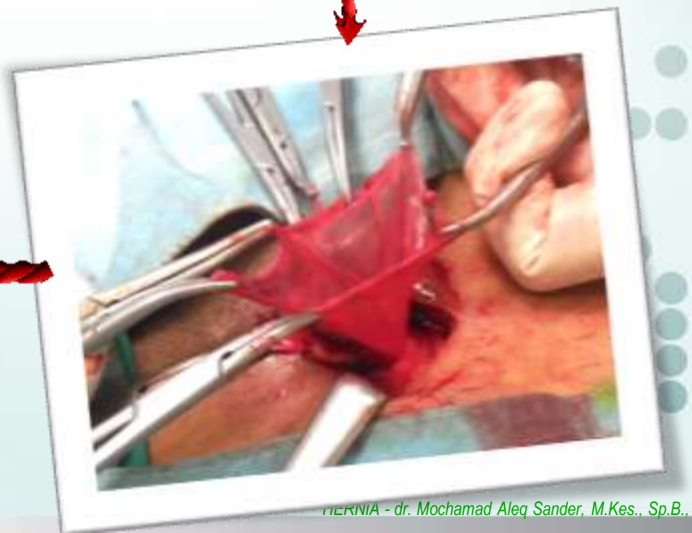
HERNIA INGUINALIS LATERALIS

(♂ 46 thn, pegawai swasta)

"tension free hernia repair"



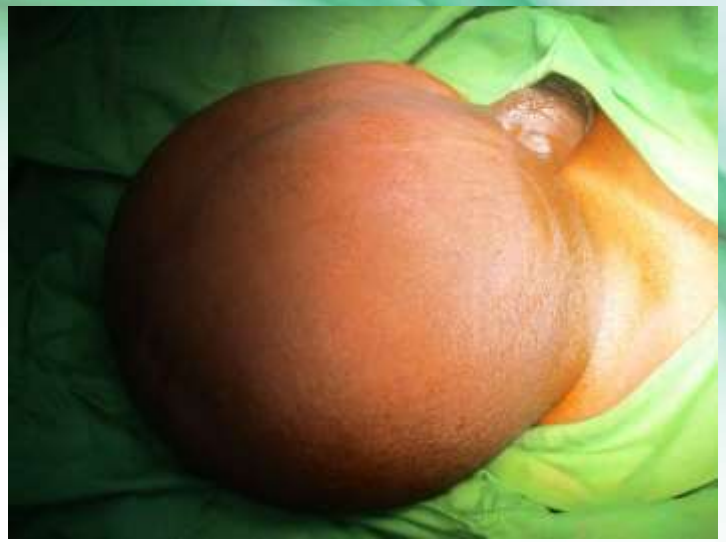


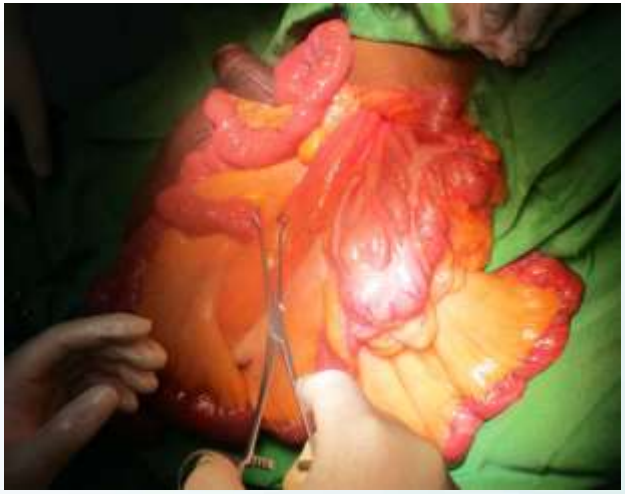


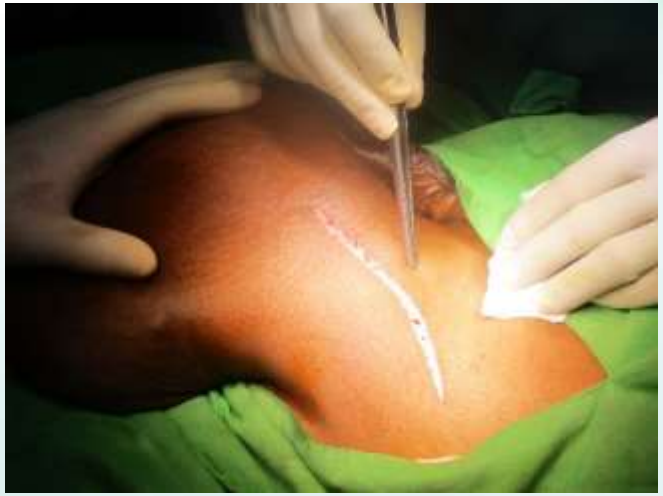
SLIDING HERNIA INGUINALIS LATERALIS

(♂ 63 thn, PETANI)

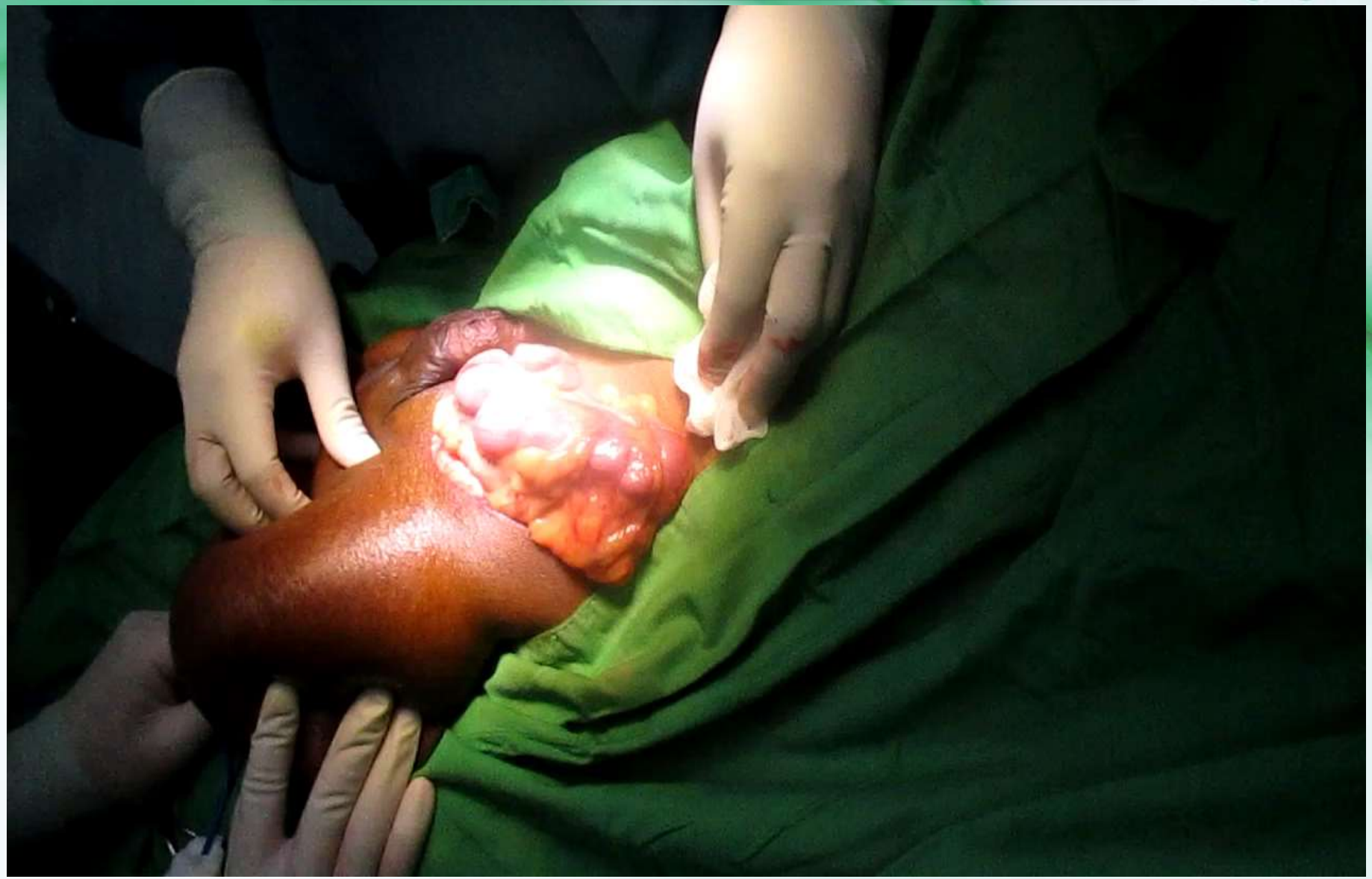
25 tahun hernia dibiarkan saja



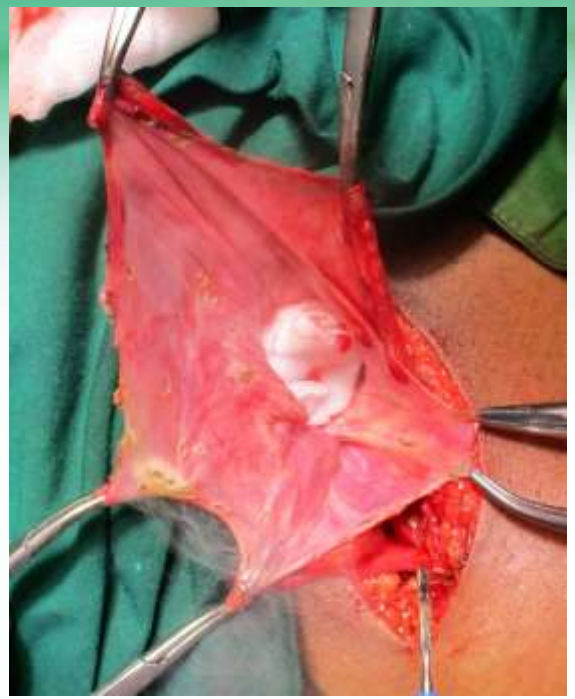


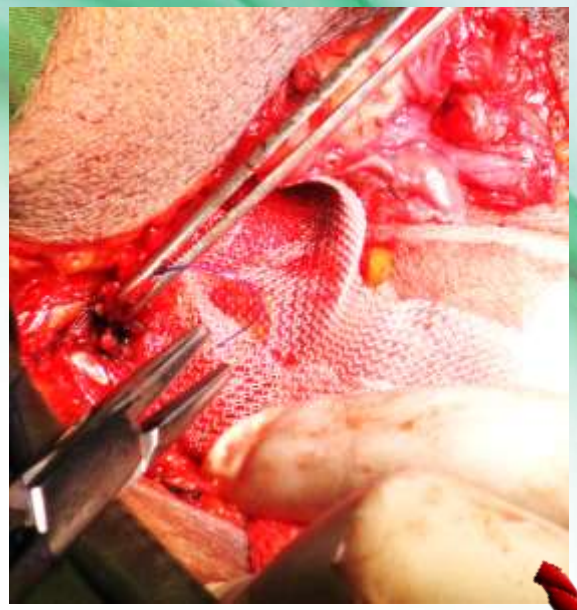


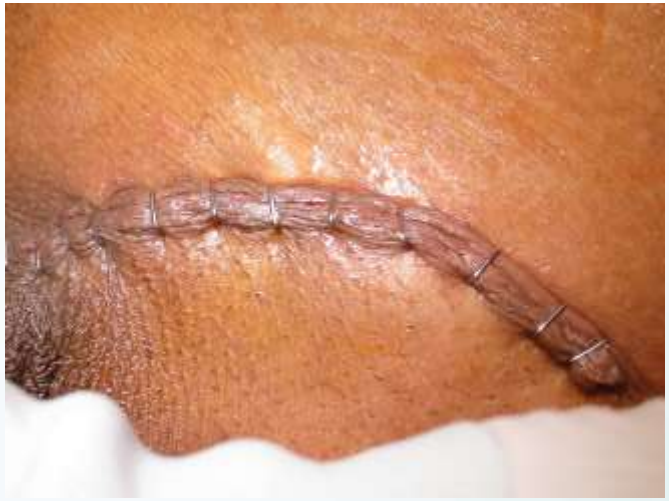
SLIDING HERNIA INGUINALIS LATERALIS

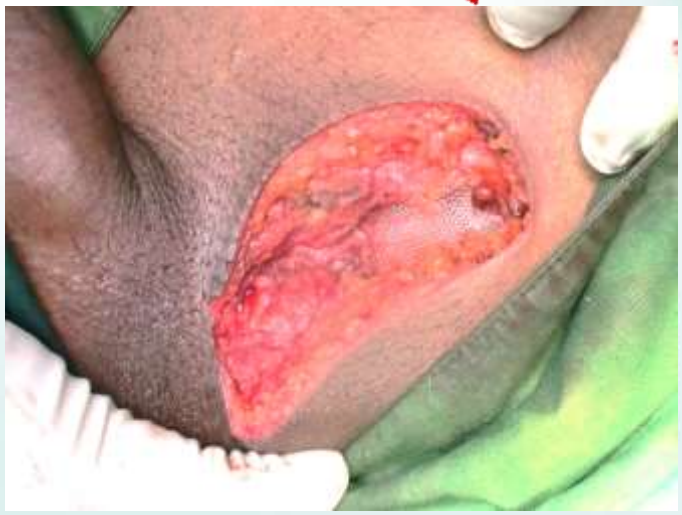


SLIDING HERNIA INGUINALIS LATERALIS





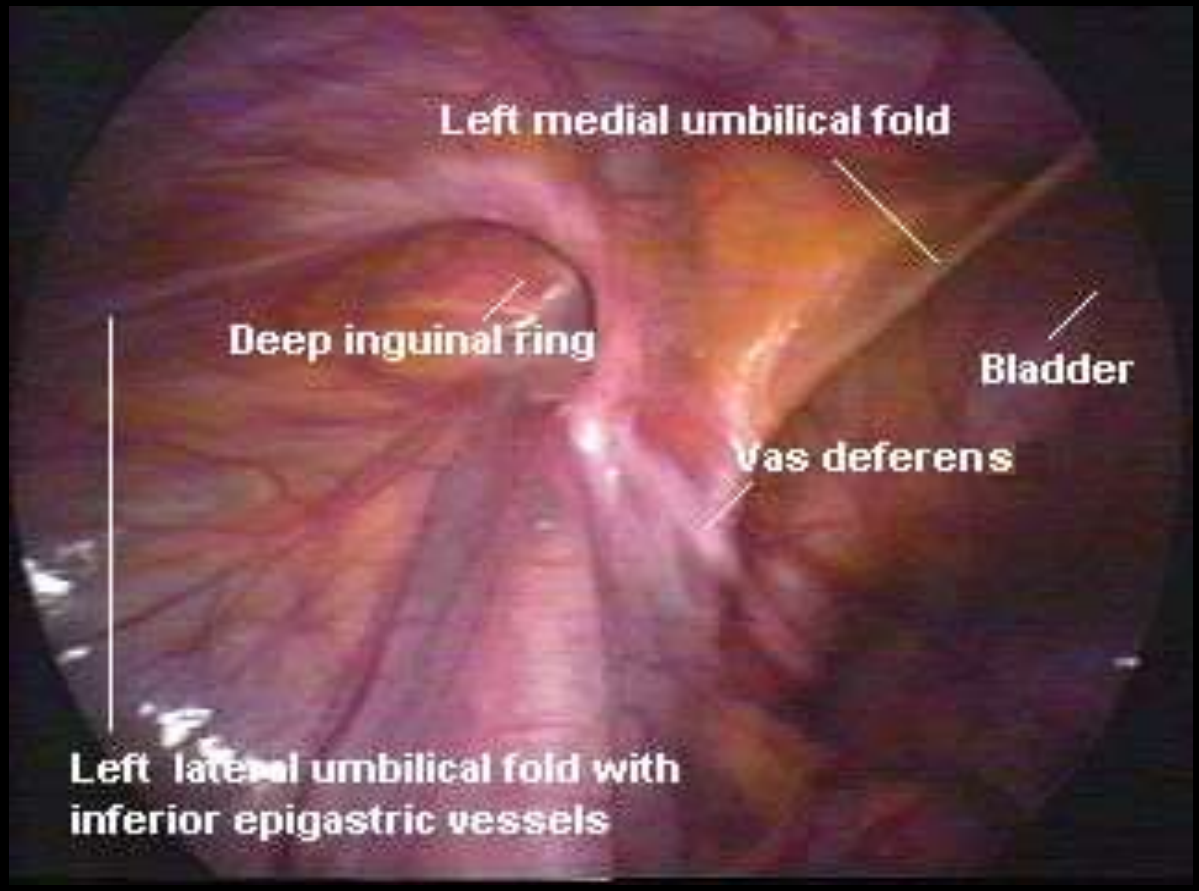




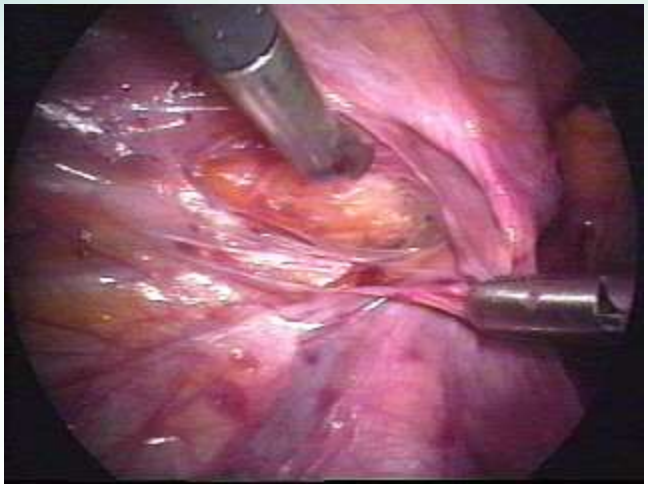
GER 1982, VELEZ UND KLEIN 1990

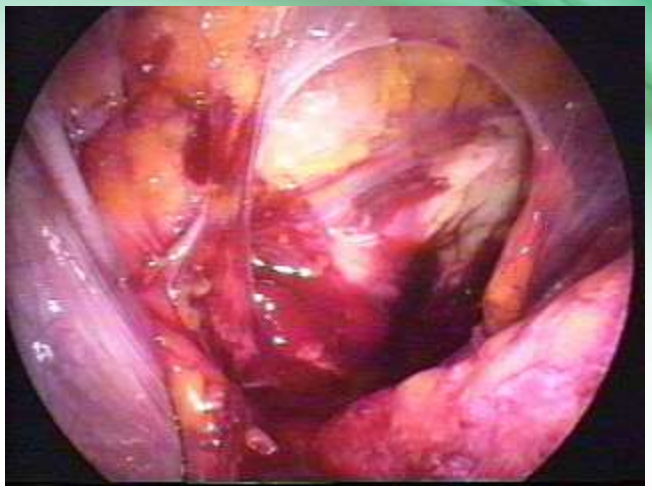
LAPAROSCOPIC INGUINAL HERNIA REPAIR

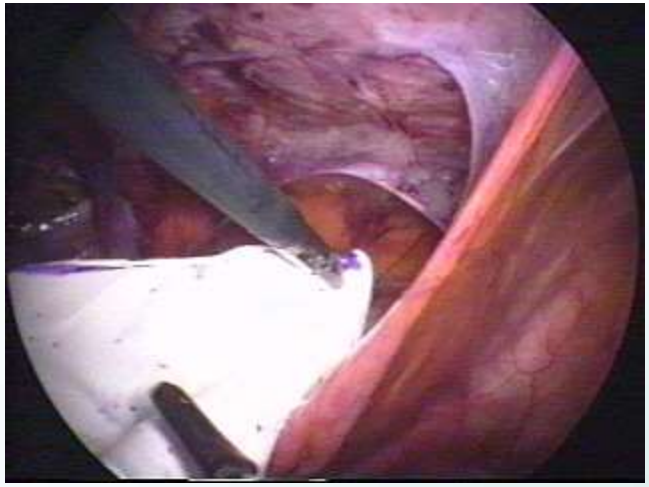
- Anatomi inguinal per laparoskopi

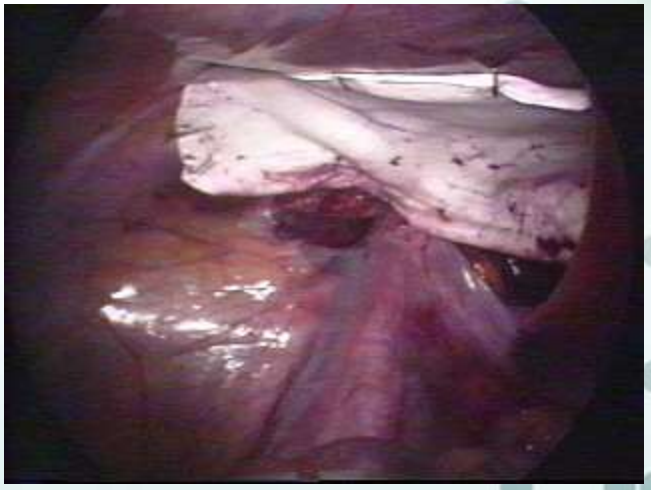


Laparoscopic Inguinal Hernia Repair









KOMPLIKASI

Intra Operatif:

1. Trauma pd Spermatic Cord
2. Trauma pd Vasa spermatica ⇨ atrofi / nekrosis testis
3. Trauma pd N. Ilioinguinalis, N. Genitofemoralis, & N. cutaneus femoris lateralis
4. Trauma pd Vasa femoralis

Post Operatif:

1. Infeksi
2. Hematoma
3. Trauma pd nervus akibat fibrosis / pembentukan neuroma pasca bedah
4. Adhesi & obstruksi usus

TERIMA KASIH