LAPAROSCOPIC APPROACHES IN THE POST-SURGICAL ABDOMEN

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Case Presentation

- 67 year old woman
- PMHx: HTN, breast cancer
- PSHx:
  - hysterectomy for fibroids (1991)
  - lumpectomy, SLNB 2014 (invasive lobular carcinoma)
- Medications: metoprolol, HCTZ
- NKDA
Case Presentation

- Ambulatory surgery: laparoscopic cholecystectomy
Abdominal Access

optical trocar entry
Abdominal Access

optical trocar entry
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optical trocar entry
Abdominal Access

open Hasson technique
Case Presentation

• Ambulatory surgery: laparoscopic cholecystectomy

• Abdominal access: LUQ, RUQ, RLQ (enterotomy)

• conversion to open: Kocher incision
Abdominal Access

Kocher incision
Case Presentation

- Ambulatory surgery: laparoscopic cholecystectomy
- Abdominal access: LUQ, RUQ, RLQ (enterotomy)
- Conversion to open: Kocher incision
- Lysis of adhesions; 1° repair of enterotomies (2)
- Cholecystectomy
Case Presentation

- Ambulatory surgery: laparoscopic cholecystectomy
- Abdominal access: LUQ, RUQ, RLQ (enterotomy)
- Conversion to open: Kocher incision
- Lysis of adhesions; 1° repair of enterotomies (2)
- Cholecystectomy
- Pathology: chronic cholecystitis, cholelithiasis
By the end of this presentation, you should be able to…

• describe laparoscopic approaches

• describe the various techniques of gaining abdominal access for laparoscopy

• describe alternative entry points and techniques for laparoscopy
Random fact of the day …

Georg Kelling (1866–1945)
Random fact of the day ...

“Lufttamponade” (1901)
Pneumoperitonium

- CO₂ - absorbed across peritoneum → circulation
- hypercarbia/acidosi
- arrhythmia, tachycardia, HTN
- ↑Myocardial oxygen demand
- ↓venous return/↓cardiac output
Abdominal Access

- veress needle
- open Hasson
- optical trochar
Veress Needle

- elevation of the relaxed abdominal wall
- umbilical incision
- spring-loaded needle placed in the abdominal cavity
- abdomen insufflated
Direct Peritoneal Access - Hasson

- skin incision, dissect down to the abdominal fascia
- Kocher clamps placed on the fascia
- incision through the fascia/peritoneum
- finger placed into the abdomen - no adherent bowel
- sutures placed on each side of the fascia and secured to a trocar
Optical Trocar

- skin incision
- optical bladeless trocar
- constant axial penetration force
- direct visual identification of the abdominal wall layers
- subcutaneous fat → rectus sheath → peritoneum
- pneumoperitoneum.
• 28 randomized control trials

• 4860 patients

• open vs closed entry\(^1\); direct trocar vs Veress needle; direct vision vs Veress needle; direct vision vs open entry

• disposable vs non-disposable, trendelenberg vs supine, lifting the abdominal wall, cutting vs blunt trocar
Summary of Results

• no advantage of open vs closed entry technique in reduction of vascular or visceral complications

• ↓incidence of failed entry with open

• also no difference with direct vision entry
Adhesions

• neither direct-trocar nor Veress needle entry should be used in patients at risk of sub-umbilical adhesions

• favor open technique

• no comment on alternative port placement
Palmer’s Point

- 3 cm below the left costal margin
- mid-clavicular line
Royal College of Obstetricians and Gynaecologists

- Preventing Entry-related gynecological laparoscopic Injuries - 2008 guidelines

- enter at a distance from the scars

- recommend left upper quadrant (Palmer’s point)

- avoid suprapubic entry - bladder

- avoid uterine fundus/posterior fornix - infection

- European and Canadian guidelines are similar
Summary

• abdominal access via verses needle, open Hasson, optical trocar

• all methods equal in terms of vascular or visceral complications

• Palmer’s point - consensus area for alternative entry with presume sub umbilical adhesions


• [http://www.sages.org](http://www.sages.org)
Hypotension develops after pneumoperitoneum is established and the 4th trocar is placed for laparoscopic cholecystectomy. The next step is:

a. convert to ex lap
b. deflate the abdomen
c. push phenylephrine
d. bolus 1L NS
e. stop the inhalation anesthetic agent
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