DIAGNOSTIC LAP/LUS IN THE WORK UP OF PATIENTS WITH CRC LIVER METASTASES

Frank Viborg Mortensen
Overlæge, dr.med.
Kirurgisk Afdeling L
Århus Universitetshospital
Criteria for Surgery

- R0 resection
- 25 % residual liver volume
- No extrahepatic disease (Relative)
Work Up

- Performance
- CT-sc. of the thorax and abdomen
- LAP/LUS
- Laparotomi
- IOUS
CT evolution

1995 2000 2003 2005 2007 2009

Single slice  Multislice 4  Multislice 16  Multislice 64  Multislice 128  Multislice 256
Material and Method

- Retrospective analysis
- 45 consecutive pt. with CRC liver metastases resectable after MDCT of the thorax og abdomen.
- LAP/LUS in GA
- IOUS
- 62 yr (±10.6)
- Number of metastases 2.1 ± 1.0

45 patients considered to have resectable colorectal liver metastases after CT-scan.

- DL (n=38)
  - Unresectable (n=3)
    - Carcinosis (n=3)
  - Failed DL and LUS because of adhesions (n=7)
  - LUS (n=35)
    - Unresectable (n=1)
      - Extensive disease (n=1)
    - Laparotomy (n=34)
    - Unresectable (n=2)
      - Carcinosis (n=1)
      - Fibro ingrowth (n=1)
      - IOUS (n=32)
      - Unresectable (n=1)
        - Fibro ingrowth (n=1)
        - Resectable (n=31)
  - Laparotomy (n=7)
  - IOUS (n=7)
  - Resectable (n=7)
Material and methods

- Retrospective analysis
- 70 consecutive patients with CRC liver metastases
- IOUS
- 66.6 yr (32.6-88.5)
- Median number of metastases 2 (0-9)
- Syncrone/metacrone 38/32

Andersen KJ et al. Experimental and Clinical Hepatology 2001;7:34-8
Economic consequences of work up without LAP/LUS

- Average price for LAP/LUS ≈ 18.000 kr
- Average price for avoiding unnecessary laparotomy ≈ 450.000 kr
Material and Methods

- Retrospective analysis
- 415 pt.: Work up Ct. or MR
- 77 pt. (19%) had LAP/LUS performed
- Inclusion criteria was e.g. advanced primary disease

Pilkington SA et al. HPB 2007;9:58-63
Complications of LAP/LUS

- SAE in 3 pt. (4 %)
- Bowel perforation in 2 pt.
- Port metastasis in 1 pt.
Possible reasons why some papers show an effect of LAP/LUS

- MDCT of poor quality
- No routine use of PET
- No use of modern surgical techniques
- No possibility for combination with intra-operative RFA to save liver tissue
1) The large majority of hepato-biliary centres in the world does not use diagnostic laparoscopy and laparoscopic ultrasonography in the work-up of patients with colorectal liver metastases (except for patients who very likely have carcinomatosis), and the research question no longer seems to be relevant. By converse, PET-CT scan (with or without contrast injection) is frequently used to rule out extra-hepatic disease. Mangafodipir-enhanced MRI (Teslascan) has been shown to be superior to helical CT for detection of liver metastases. Using these imagery techniques, it appears clearly that diagnostic laparoscopy and laparoscopic ultrasonography have no longer a place in this setting.