Hepatic incidentaloma

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Hepatic incidentaloma

- Hepatic focal lesion
- found incidentally
- on US or other imaging procedures
- the finding is usually **not related** to clinical condition that the patient was investigated for
Hepatic incidentaloma

- **Clinical presentation**
  - in asymptomatic person
    - routine medical check-up
    - in patients with CLD
    - in patients with cancer - known or unknown
  - in symptomatic patients - nonspecific abdominal complaints
Hepatic incidentaloma

• Focal liver lesions
  - Cystic
  - Solid
    • in normal liver
    • in CLD
  - Solitary
  - Multiple
NATURE OF FOCAL LESIONS IN THE LIVER

- **Nature of lesion**
  - Benign with indolent clinical course
  - Benign with mlg potential
  - Malignant - aggressive

- **Dx**
  - Hemangioma, FNH, focal fat, cysts
  - Adenoma
  - Primary/secondary
Hepatic incidentaloma

Initial assessment

• History + physical examination
  - OC + sex hormone use
  - history or signs of CLD
  - HBV, HCV infection
  - ulcerous colitis
  - malignancy

• Laboratory tests
  - LFTs, serology for HBV, HCV
  - Tu markers - AFP, CEA, Ca 19-9
  - CgA, 5 HIAA
Hepatic incidentaloma

Further assessment

- Imaging techniques
  - CEUS
  - CT
  - CTA, CTAP
  - MRI - contrast enhanced
- PET scan, radionuclide scan
- Cytology or/and biopsy
- Dx laparascopy/laparatomy
Focal liver lesions without CLD
Hemangioma

- Prevalence 0.7 % - 7.4 %
- Single or multiple
- Usually asymptomatic
- Bleeding, infarction - pain
- Exceptional - Kassabach-Merrit syndrome
- No Tx
FNH

• Prevalence 0.01 %
• Usually young women
• CEUS or MRI Dx in 70 % - central scar
• No Tx
Liver cyst

- Simple cyst
- Congenital
- Prevalence 2% - 7%
- Solitary/multiple
- US usually sufficient
- Asymptomatic - no TX
- Tx needed in
  - Symptomatic solitary
  - Hydatid cyst
- Polycystic liver - LT
HEPATIC ADENOMA

- Prevalence 0.01%
- Young women on OC
- Dx CEUS or MRI
- Management needed
  - Stop OC
  - Follow up 6 mo
  - Ev. surgery
Focal steatosis

- Prevalence unknown
- US or MRI
- In normal liver - no Tx
- In CLD - HCC?
- Small HCC can include focal fat collection
Metastatic disease

- 35% - 40% of cancers develop liver metastases
- Poor prognosis - majority could not be treated
- 2 exceptions - NET, CRC
- Dx process depends on the general condition of the patient
- primary cancer if known
Focal liver lesion with CLD
HCC - diagnosis - EASL

- Criteria for diagnosis of HCC
- Combined criteria: one imaging technique - associated with AFP
  - focal lesion $\geq 2$ cm with arterial hypervascularization
  - $\uparrow$ AFP = 400 ng/ml
HCC - diagnosis - EASL

- Criteria for diagnosis of HCC
- Cytological criteria
- Noninvasive criteria: two coincident imaging techniques
  - Focal lesion ≥ 2 cm with arterial hypervascularization

**Imaging techniques considered - US, spiral CT, MRI and angiography**
HCC

- Small / early HCC
- < 1 cm – follow up – US + AFP/3 mo
- 1 – 2 cm
- Cyto/hystology – not in pts suitable for OLT
REGENERATIVE NODULE IN CIRRHOSIS

- DDx of small HCC
- Regenerative and/or dysplastic nodule
- Hystology needed
Hepatic incidentaloma - Rational approach
Hepatic incidentaloma

• In evaluating focal liver lesion, the clinician is challenged with making
  • a specific diagnosis in
    - an expeditious and cost-effective fashion
  • to assure cost-effective management
  • a decision on which liver mass
    - should not be treated
    - could not be treated
    - should be and could be treated
Hepatic incidentaloma

- 4 essential questions
- Is the lesion benign or malignant?
- Are there risk factors or any evidence of CLD?
- Are there risk factors or any evidence of malignancy?
- Age/gender of patient
How to make a diagnosis with the minimal number of tests?

What are the risk of missing the diagnosis?
What are the risks of overdiagnosing?
HEPATIC INCIDENTALOMA
5 year Prospective study -
(N = 818)

- Ljubljana, Slovenia + Trieste, Italy
- All the patients that were referred with focal liver lesion to 2 centers
- Multidisciplinary team - GI, Onco, Radiol, Surg
- Main investigators
  - TS - C. Tiribelli, LJ - S. Markovič
HEPATIC INCIDENTALOMA
5 year Prospective study

• Findings
  • LJ 423 pts + TS 369 pts = 818 pts
  • M/F 403/405 (50%/50%)
  • Age range - 17 years - 86 years
  • Benign lesions 50%
  • Malignant 50%
HEPATIC INCIDENTALOMA
5 year Prospective study -
(N = 818)

- DG

<table>
<thead>
<tr>
<th>Condition</th>
<th>No. of pts</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemangioma</td>
<td>225</td>
<td>29 %</td>
</tr>
<tr>
<td>HCC/CHC</td>
<td>223</td>
<td>28 %</td>
</tr>
<tr>
<td>Regenerative nodules</td>
<td>17</td>
<td>2 %</td>
</tr>
<tr>
<td>Cysts</td>
<td>100</td>
<td>8 %</td>
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<tr>
<td>Focal fatty coll.</td>
<td>24</td>
<td>6 %</td>
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<tr>
<td>FNH</td>
<td>11</td>
<td>1.6 %</td>
</tr>
<tr>
<td>Adenoma</td>
<td>9</td>
<td>1.1 %</td>
</tr>
<tr>
<td>Metastatic disease</td>
<td>179</td>
<td>22 %</td>
</tr>
</tbody>
</table>
HEPATIC INCIDENTALOMA
5 year Prospective study

• Multivariate analysis performed
• Main risk factors for malignancy
  • Gender and age > 50
  • CLD
Males and nature of lesions

maschi

% pazienti

benigni
maligni

classi di età

29-40 aa 41-50aa 51-60aa >60aa
Females and nature of lesions

![Graph showing the percentage of patients with benign and malignant lesions across different age classes.](Image)
Hepatic incidentaloma

- Young woman
- 95% - hemangioma or FNH
- No Tx, no further Dx
- LFTs, viral serology
- follow up US in 6 mo
- No more follow up
Hepatic incidentaloma

- M/F > 50 let with CLD
- 80 - 95% risk for HCC (no other lesions apart from regenerative nodules were found in this group of pts)
- Staging of CLD and tumor
- If eligible - resection or OLT
Hepatic incidentaloma

- Metastatic disease
- Median survival 6 mo
  - exclude NET
  - exclude CRC
HEPATIC INCIDENTALOMA
5 year Prospective study

• Questions
• What was the clinical indication for US investigation?
• Was the final Dx in correlation with clinical presentation?
• How many additional imaging procedures and cyto/hystology were performed in pts?
• How many patients needed/were treated?
• What % of first US finding was already diagnostic?
What was the clinical indication for US investigation?

• Answers
  • 46 % - nonspecific abdominal complaints
  • 54 % - abdominal pain
    - 31 % - suspected gallstones or renal stones
Was the final Dx in correlation with clinical presentation?

- Answer
  - Yes 23 %
  - No 77 %
How many additional imaging procedures and cyto/hystology were performed in pts?

- **Additional imaging methods**
  - US control: 663 pts, 80%
  - CT: 414 pts, 50%
  - CTA: 245 pts, 30%
  - MRI: 242 pts, 29%
  - Cyto/hystology: 237/294 pts, 29%/36%
What % of first US finding were already diagnostic?

• Answer

• 539 pts 66 %

• (1564 IP + 531 biopsies)
How many patients needed/were treated?

- Tx was not needed: 46%
- Tx: 54%
- Liver resection: 13%
- Paliative chemotherapy: 13%
- Symptomatic therapy: 22%
- Other interventions: 3%
Diagnostic algorithm for hepatic incidentaloma

Focal liver lesion on US

Clinical findings

Therapeutic options - available, possible, needed

Further diagnostics
Hepatic incidentaloma

• Conclusions
  • exclude malignancy when appropriate
  • in malignancy decide whether treatable
  • choose treatment modality
  • proceed with the staging
  • rely on clinical wisdom
  • do not overdiagnose
The lesson to be taken home

Rely on clinical wisdom, even though the »ultimate« diagnosis may be only one test or two away.
Thank you for your attention