ESMO ADVANCED COURSE ON INDIVIDUALISING THE THERAPEUTIC APPROACH IN PATIENTS WITH NENS

Liver metastasectomy

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DISCLOSURES
Ipsen research Grant
IMAGING OF NELM

Sensitivity for NELM

<table>
<thead>
<tr>
<th>Test</th>
<th>Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>40%</td>
</tr>
<tr>
<td>CEUS</td>
<td>60-70%</td>
</tr>
<tr>
<td>CT</td>
<td>70-80%</td>
</tr>
<tr>
<td>MRI</td>
<td>85-90%</td>
</tr>
<tr>
<td>GA-Dotatate PET CT</td>
<td>85-90%</td>
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</tbody>
</table>
Soyer Eur J Radiology 2011

27 patients operated with 64 livermetastases

Livermetastases 3-48 mm (mean 19 mm)

<table>
<thead>
<tr>
<th>Modality</th>
<th>Number of Metastases</th>
<th>Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>DW-MRI</td>
<td>54/64</td>
<td>84%</td>
</tr>
<tr>
<td>T2W-FSE</td>
<td>44/64</td>
<td>68%</td>
</tr>
<tr>
<td>Gadol MRI</td>
<td>51/64</td>
<td>79%</td>
</tr>
</tbody>
</table>

16-32% undetected pre-operatively!
RECURRENT AFTER RESECTION OF LIVERMETASTASES

Xiang J Surg Oncol 2018

548 patients with GEP-Net underwent resection of liver metastases
162 patients with Grade 1 disease

After a median follow-up of 69 months,
  - 59 (36.4%) patients had tumor recurrence;
  - 23 (39.0%) patients recurred within 1 year after surgery
  - 36 (61.0%) recurred after 1 year.

Early recurrence was associated with worse outcome vs late recurrence (5-year OS, 72.4% vs 92.0%; \( P = 0.02 \))
Recurrence or Undetected NELM?
OPERATIVE TECHNIQUES NELM

- Segment resection
- Hemihepatectomy
- Metastasectomy
- Laparoscopic / open or robot-assisted
<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Any deviation from the normal postoperative course without the need for pharmacological treatment other than the “allowed therapeutic regimens”, or surgical, endoscopic and radiological interventions.</td>
</tr>
<tr>
<td>II</td>
<td>Requiring pharmacological treatment with drugs beyond those allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.</td>
</tr>
<tr>
<td>III</td>
<td>Requiring surgical, endoscopic or radiological intervention.</td>
</tr>
<tr>
<td>IV</td>
<td>Life-threatening complication requiring critical care management; CNS complications including brain haemorrhage and ischemic stroke (excluding TIA), sub-arachnoidal bleeding.</td>
</tr>
<tr>
<td>V</td>
<td>Death of a patient</td>
</tr>
</tbody>
</table>
COMPLICATIONS OF LIVER RESECTION

- Bile leakage / biliary fistula 5-10%
- Bleeding 5-10%
- General complications 20-35%
- Liver failure < 1%
- Mortality of hemihepatectomy 5-15%
NELM IN FUNCTIONING TUMORS

- Resection or debulking liver if all other treatment fails
  - Not a first option

- Resection of NELM in functioning tumors should be combined with resection of the primary tumor

- Most successful if < 25% of liver is involved

- Be prepared for dedifferentiating livermetastases!
CONCLUSIONS AND TAKE HOME MESSAGE

- Discuss in multidisciplinary meeting with liver experts in imaging and resection

- Be prepared to have a low curative rate (45%) possibly due to low sensitivity of imaging studies

- Debulking, especially in functional tumors is still possible, if all other treatments fail

- Liver surgery, especially hemihepatectomy, is associated with
  - morbidity (up to 35%)
  - mortality (up to 15%)