Case presentation

Rezene Berhe, MD
Consultant Internist and Gastroenterologist
Case 1

• A 35 year old M presented with HBsAg positive result. (March 2013)

• Back ground history
  – History of jaundice
  – intermittent bronchial asthma attack
  – Alcohol consumption on occasions
  – Family history
• Ascites

• Lab:
  – ALT and AST: 3x
  – ALP, INR, Bil & ALB: N
  – Plt: 90
  – HBeAg: negative
  – HBV DNA: 150,000u/ml
- Imaging: (US)
  - Cirrhotic liver, ascites

- EGD:
  - Grade 1 EV

- HBV related Liver cirrhosis (Child A)
- On TDF, diuretic
• Regular follow up (1 yr)
  – UGIB, Worsening of Ascites
  – Repeat EGD: Esophageal varices (2), red signs
  – Imaging: same (cirrhosis, PHTN, no mass)
  – VL: undetectable
• NSBB, diuretics optimized
• TDF continued
• Two years: on treatment:
  – Weight loss
• Imaging: US
  – Cirrhotic liver
  – Rt lobe mass, PVT
• CT: 7x5 cm mass, two more masses, PVT
• AFP: 10,500
Management

• Pretreatment assessment:
  – Tumor size, number and location
  – Vascular invasion
  – Metastasis
  – Liver function, severity, reserve, Portal hypertension
  – Functional status
  – Distinguish the stage (BCLC)
Case 1: Treatment algorithm for HCC (BCLC)
**Management**

### Stage
- **Very Early (< 2cm)**
- **Early (< 3 cm)**
- **Intermediate stage**
- **Advanced/terminal**

### Intention
- **Curative (Re, Ab)**
- **Curative (Re, Ab, Tr)**
- **Curative not possible (EM)**
- **Palliative (Sr, SP)**

### Survival
- 5 yr. sur 80%
- 50-70%
- 20-40 months
- Med sur 4-8 mon
Case 1: A 35 year old male with CHBV on TDF for 2 years
Evidence of cirrhosis

- CT: 7x5 cm mass, two more masses, PVT
- TARE performed
- Sorafenib
- Severe hyper-bilirubinemia and HE
TACE
(Cisplatin, doxorubucin, Mitomycin)

• Un resectable Tumor
• Size > 5 cm
• Multifocal
• Bridge to transplantation
• Absence of PVT, HE, high bil
TARE (Yttrium-90 microspheres)

- In PVT (contraindication for TACE)
- Good outcome in preserved liver function in the presence of high tumor burden (7 or more)
- Downgrading to RFA
- Median survival: 16-18 months.
Case 2

• A 55 year old woman presented with RUQ discomfort.

• Background history
  – Type II DM-5yrs on OHA
  – No family history of malignancy
• BMI 28
• HBsAg and Anti HCV Ab: N

• Abdominal US
  – Right lobe 2.4 x 3cm mass
  – Hyper-echogenic, irregular surface
  – Focal lesion? HCC
• CT (triphasic): mass (HCC), no PVT, no metastasis
• AFP: N
• Liver biopsy: HCC
Case 2: Treatment algorithm for HCC (BCLC)

HCC

Stage 0
PST 0, Child-Pugh A

Very early stage (0)
Single <2 cm, Carcinoma in situ

Single
Portal pressure/bilirubin
Increased
Normal

Liver transplantation (CLT/LDLT)
Resection

Curative treatment (30-40%) Median OS >60 mo; 5-yr survival: 40-70%

Stage A-C
PST 0-2, Child-Pugh A-B

Early stage (A)
Single or ≤3 nodules ≤3 cm, PS 0

3 nodules ≤3 cm
Associated diseases
No
Yes

RF/PEI

Stage D
PST >2, Child-Pugh C*

Intermediate stage (B)
Multinodular, PS 0

Advanced stage (C)
Portal invasion, N1, M1, PS 1-2

TACE
Sorafenib

Target: 20% OS: 20 mo (14-45)
Target: 40% OS: 11 mo (6-14)

Best supportive care

Target: 10% OS: <3 mo

Liver Cancer 2015;4:85–95
Case 2: A 55 year old female Known Type II

- CT: 2.4 x 3cm mass, no PVT, no metastasis.

- Surgical: Intraop: cirrhotic liver (high risk for resection)

- Injecting therapy (ethanol), RFA
### Percutaneous Ethanol Injection (<3cm)

#### Survival Rates (%)

<table>
<thead>
<tr>
<th>Child</th>
<th>1-yr</th>
<th>3-yr</th>
<th>5-yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>96</td>
<td>72</td>
<td>51</td>
</tr>
<tr>
<td>B</td>
<td>90</td>
<td>72</td>
<td>48</td>
</tr>
<tr>
<td>C</td>
<td>94</td>
<td>25</td>
<td>0</td>
</tr>
</tbody>
</table>

* < 3cm, 93/112 single

---

RFA

• Surrounding tissue heat to induce coagulative necrosis.
• Lesion 3-5 cm, 3 or fewer lesions
• Comorbidities
• Metastatic

• Avoid (Large > 5 cm, blood ducts, Child C)
# RFA for HCC

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Survival</th>
<th></th>
<th>Recurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 year</td>
<td>3 year</td>
<td>Local</td>
</tr>
<tr>
<td>RFA</td>
<td>100</td>
<td>72.7</td>
<td>18.2</td>
</tr>
<tr>
<td>Resection</td>
<td>97.9</td>
<td>83.9</td>
<td>2.2</td>
</tr>
</tbody>
</table>

*SN Hong et al. J Clin Gastroenterol 2005;39:247  Samsung Medical Center, Seoul, Korea*
Surveillance - How

• Ultrasound
  – Sensitivity: 29-100%
  – Operator dependent

• AFP:
  – Sensitivity of AFP: (41-65%)
  – Only 53% had raised AFP above 200
  – (longitudinal AFP, Age, Plt count, ALT - To improve sen and spe: needs more data)
  – AFP L-3, PIVKA-II (Jap guide line)

• Both US and AFP
Surveillance- When

• Every 6 months:
  – Sensitivity of 70% at 6 mon Vs 50% at 12 mon.
    *Mourad A et al. Hepatology 2014; 59: 1471-1481*

  – Japan guide line recommendation 3-4 months
    • more cases are detected
Summary

- HCC: screening and early detection even while on treatment
- NAFLD-HCC diagnosed at late stage/poor prognosis
- Prognostic evaluation is critical step (BCLC)
- Assess liver function and tumor burden
Thank you