Pancreatic Adenocarcinoma

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16 February 2020
DISCLOSURES

• None
CASE

- 63 years old female
- Referred from HPB surgery
- History of obstructive jaundice
HISTORY

• Main complaint: Presented with 2 months history of progressive jaundice associated with dark urine, pale stools and pruritus

• Past medical history: HIV negative. No known comorbidities. No previous surgeries.

• Current pensioner. Previously employed as a domestic worker.

• Social: No history of alcohol consumption or smoking

• Family history: Unremarkable
ON EXAMINATION

• ECOG PS 1
• Scleral jaundice
• Abdomen: Hepatomegally
• Normal systemic examination
WORK UP

• Pancreatic CT Protocol: Impression of a head of pancreas mass 14x8mm in diameter. No obvious vessel infiltration. Peripancreatic lymphadenopathy posterior to the pancreas – Largest 11.1mm. Hepatomegaly 16.2cm
• Staging CT chest: No lung metastases.
• ERCP: Done for biliary decompression
• Blood investigations:
  • - Hepatitis studies
  • - Liver function tests: Total bilirubin ↑↑89 H umol/L
  • Conjugated bilirubin ↑↑ 66 H umol/L
  • Deranged transaminases
  • - CA 19-9: 2
  • - Albumin: 35
  • - Urea, electrolytes & creatinine
  • - Full Blood count
MULTIDISCIPLINARY CONSENSUS

• The patient was discussed in a multidisciplinary team consisting of a hepatobiliary surgeon, Clinical and radiation oncologist. And the patient was deemed operable.
• A partial Whipple procedure was done
• 45Gy in 1.8Gy fractions with concurrent Capecitabine
• Adjuvant Capecitabine
PREOPERATIVE PARAMETERS

1. No tumour contact with SMV or Portal vein
2. No arterial tumour contact with SMA, CA and CHA
3. No distant metastases
4. Stage 1a
5. Resectable
PARTIAL WHIPPLE PROCEDURE

Histology:
• HOP mass 1.8X 0.8cm
  Well differentiated Pancreatico-Biliary type adenocarcinoma present on surgical margins.
• No tumour noted in LNs, GB, CBD and Small bowel
POOR PROGNOSTIC FACTORS

• Growth >3cm
• Nodal involvement
• Portal vein infiltration
• Post operative positive margins*
• Liver/Lung metastases
• Ascites/Trousseau’s sign/Left supraclavicular LN spread
• Liver dysfunction*
• Associated pancreatitis and Diabetes Mellitus

*Present in patient mentioned in case summary*
POSTOPERATIVE ADJUVANT TREATMENT

Clinical trial preferred or chemotherapy alone or induction chemotherapy followed by chemoradiation and subsequent chemotherapy.

Surveillance every 3–6 mo for 2 yr, then every 6–12 mo as clinically indicated:
- H & P for symptom assessment
- CA 19-9 level (category 2B)
- Chest CT and CT or MRI of abdomen and pelvis with contrast

General principles:
- Prior neoadjuvant therapy
- No evidence of recurrence or metastatic disease
- No prior neoadjuvant therapy
- Clinical trial preferred or chemotherapy alone
- Surveillance every 3–6 mo for 2 yr, then every 6–12 mo as clinically indicated

Outline:
- Baseline postoperative CT (chest, abdomen, and pelvis) with contrast CA 19-9 and Germline testing, if not previously done.
- Identification of metastatic disease
- See Metastatic Disease (PANC-8)

If metastatic disease is identified, consider chemo radiation in the instance of a positive margin R1 resection.
# ROLE OF ADJUVANT THERAPY

## PRO-ADJUVANT CRT

<table>
<thead>
<tr>
<th>Trial, Year of Publication;</th>
<th>Treatment Arms</th>
<th>5-Year Rate OS (Actual or Estimated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GITSG 9173, 1985, 43 pts.</td>
<td>CRT 40Gy+ Concurrent 5FU vs. Observation</td>
<td>18% vs. 5%</td>
</tr>
<tr>
<td>Mayo Clinic, 2008, Retrospective, 472 pts</td>
<td>CRT (50.4Gy+ 5FU) vs. Observation</td>
<td>CRT arm did better than observation arm (Median Survival of 25 vs 19 months)</td>
</tr>
<tr>
<td>RTOG 9704, 2008 451 pts.</td>
<td>Neo-adj Gem x 3, then CRT( 50.4Gy+5FU), followed by Gem x12 vs. Neo-adj 5fu x3, then CRT (50.4Gy+5FU), then 5FU x12</td>
<td>31% vs 21%</td>
</tr>
</tbody>
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## ROLE OF ADJUVANT THERAPY

### ANTI-ADJUVANT CRT

<table>
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<th>Treatment Arms</th>
<th>5-Year Rate OS (Actual or Estimated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK, ESPAC-1, 2001</td>
<td>CRT 40Gy+ Concurrent 5FU + vs. Observation</td>
<td>No difference in OS</td>
</tr>
<tr>
<td>EORTC 40891, 1999; 218</td>
<td>CRT (40 Gy/20 fr, 5FU) vs. Observation</td>
<td>No difference in OS</td>
</tr>
</tbody>
</table>
## ROLE OF ADJUVANT THERAPY

### ADJUVANT CHEMOTHERAPY

<table>
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<th>Trial, Year of publication</th>
<th>Treatment arms</th>
<th>5-year rate of OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONKO-001, 2013, 368 pts</td>
<td>Adjuvant Gem X6 (No RT) vs. Observation</td>
<td>-20% vs 10% -DFS 13.4 vs 6.7 months</td>
</tr>
<tr>
<td>ESPAC-3, 2010</td>
<td>5-FU vs Gem. No RT</td>
<td>Same Median survival -23 Months</td>
</tr>
<tr>
<td>ESPAC-4, 2017</td>
<td>Gem vs Gem+ Capecitabine. No RT</td>
<td>Median survival was 25.5 vs 28 months favoring Gem+ Capecitabine</td>
</tr>
</tbody>
</table>
POSTOPERATIVE ADJUVANT TREATMENT

• There is no clear consensus on what type of adjuvant therapy should be used for patients with pancreatic cancer.
ROLE OF ADJUVANT THERAPY

Chemoradiation is the favored treatment modality by many in the United States while Gemcitabine based chemotherapy is favored in Europe.
RECOMMENDATIONS

Surgical resection is a prerequisite for cure of pancreatic cancer.

Adjuvant treatment should be started within eight weeks of surgery, if possible.

Enrollment in a clinical trial is encouraged as there are no studies showing significant OS in the adjuvant setting.

Germ line testing is recommended to all patients with confirmed pancreatic cancer.
Thank You