CHEMO-RADIOThERAPY WITH WEEKLY PACLITAXEL & CARBOPLATIN

Chemo-radiotherapy for unresectable Stage III NSCLC, only for patients not suitable for cisplatin

Drugs/Dosage:

- Paclitaxel 45 mg/m² IV once weekly during RT (Day 1, 8, 15, 22, 29 & 35)
- Carboplatin AUC 2 IV once weekly during RT (Day 1, 8, 15, 22, 29 & 35)

Radiotherapy:

- 64Gy in 32 fractions
- Chemotherapy should be administered before radiotherapy on days when chemotherapy is scheduled

Administration:

- Premedication for paclitaxel:
  - Dexamethasone 8mg IV }
  - Chlorphenamine 10mg IV }
  - Ranitidine 50mg IV }
  - Give 30 minutes prior to paclitaxel

  Paclitaxel in 250ml 0.9% sodium chloride over 1 hour, administered via a PVC-free giving set with a 0.2 micron in-line filter
  - then
  - Carboplatin in 250ml 5% glucose over 30 – 60 minutes

Frequency:

- a 6 week course of chemo-radiotherapy as above, followed by 2 cycles of 3-weekly paclitaxel & carboplatin (see separate protocol)

Main Toxicities:

- infusion-related hypersensitivity reactions; myelosuppression; alopecia; myalgia / arthralgia; peripheral neuropathy; dysphagia; ovarian failure / infertility

Anti-emetics:

- paclitaxel & carboplatin: highly emetogenic (but prescribe oral dexamethasone 2mg bd x 2 days as 1st line anti-emetic TTO)

Extravasation:

- paclitaxel is a vesicant

Regular Investigations:

- FBC once weekly during RT (Days 1, 8, 15, 22, 29 & 35)
- U&Es once weekly during RT
- LFTs once weekly during RT
- EDTA prior to 1st cycle

Comments:

- Carboplatin dose should be calculated using the Calvert Formula:
  - Dose = Target AUC x (25 + GFR)

  Cycle 1 may be given using the Cockcroft and Gault formula to predict creatinine clearance if the EDTA is not yet available. When using C&G, a “cap” of 125 ml/min should be used for carboplatin dose calculations.

  Carboplatin dose should be re-calculated using the EDTA result for subsequent cycles (do not “cap”). EDTA should only be repeated if there is a 30% change in serum creatinine.

  For patients who experience a hypersensitivity reaction to carboplatin, see the SWSH Carboplatin Hypersensitivity Guidelines.
## Dose Modifications

### Haematological Toxicity:

<table>
<thead>
<tr>
<th>Haematological Toxicity</th>
<th>Neutrophils ≥ 1.5 x 10^9/l or Platelets ≥ 75 x 10^9/l</th>
<th>Proceed with full doses of chemotherapy.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Neutrophils 1.0 - 1.4 x 10^9/l or Platelets 50 - 74 x 10^9/l</td>
<td>Give 50% dose of both paclitaxel and carboplatin for 1 week. Continue with radiotherapy.</td>
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<tr>
<td></td>
<td>Neutrophils &lt; 1.0 x 10^9/l or Platelets &lt; 50 x 10^9/l</td>
<td>Omit chemotherapy for 1 week. Continue with radiotherapy</td>
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</tbody>
</table>

When a chemotherapy dose reduction or omission is required, re-escalation of the doses should be performed for subsequent doses, according to the FBC on the day of treatment.

### Renal Impairment:

If EDTA or calculated CrCl < 20ml/min, carboplatin is contra-indicated.

### Hepatic Impairment:

A paclitaxel dose reduction should probably be given initially if impaired hepatic function. Due to lack of data, dose recommendations not available. If in doubt, contact the relevant Consultant.

### Neuropathy:

If Grade 1-2 peripheral neuropathy develops, seek advice from Consultant regarding future paclitaxel dosing.

### Myalgia / Arthralgia:

Due to paclitaxel and often co-exist, usually Grade 1 or Grade 2. Management consists of reassuring patients that it is self-limiting. Consider prescribing NSAIDs, but may be ineffective.

### References:

Belani, CP et al; JCO 2005; 23: 5883 – 5891 (LAMP trial)