Chemotherapy Protocol

LUNG CANCER – SMALL CELL (SCLC)

CISPLATIN-ETOPOSIDE

(Intravenous)

Regimen

- SCLC – Cisplatin-Etoposide IV

Indication

- Limited stage SCLC
- Usually given concurrently with radical thoracic radiotherapy
- WHO Performance status 0, 1, 2
- Radical intent

Toxicity

Drug	Adverse Effect
Cisplatin	Neuropathy, nephrotoxicity, ototoxicity
Etoposide	Hypotension on rapid infusion, hyperbilirubinaemia

The adverse effects listed are not exhaustive. Please refer to the relevant Summary of Product Characteristics for full details.

Monitoring

Disease

- A baseline chest x-ray should be performed before starting treatment and up to date (ideally within 1 month) cross section imaging should also be performed

Regimen

- EDTA or calculated creatinine clearance before the first cycle
- FBC, LFTs and U&Es prior to each cycle
- A chest x-ray should be performed before each cycle
- Consider formal audiology test if relevant

Dose Modifications

The dose modifications listed are for haematological, liver and renal function only. Dose adjustments may be necessary for other toxicities as well.

In principle all dose reductions due to adverse drug reactions should not be re-escalated in subsequent cycles without consultant approval. It is also a general rule for chemotherapy that if a third dose reduction is necessary treatment should be stopped.

Please discuss all dose reductions or delays with the relevant consultant before prescribing, if appropriate. The approach may be different depending on the clinical circumstances. The following is a general guide only.

Haematology

Prior to prescribing on day one of the cycle the following criteria must be met;

Criteria	Eligible Level
Neutrophil	equal to or more than $1.5x10^9$/L
Platelets	equal to or more than $100x10^9$/L

If radiotherapy is being given as part of the treatment pathway the haemoglobin should be kept above 12g/dL during the radiotherapy.

Thereafter the following modifications are appropriate based on day one blood counts.

Neutrophils ($x10^9$/L)		Platelets ($x10^9$/L)	Dose Modifications
Less than or equal to 1.5	or	Less than or equal to 100	Delay both cisplatin and etoposide until the counts have recovered to the eligible levels
Febrile neutropenia or treatment delay for a grade 4 neutropenia of more than seven days duration	or	Grade 4 thrombocytopenia requiring medical intervention or grade 2 and above bleeding in association with thrombocytopenia	In the first instance reduce the dose to 80% of the original dose. For a second episode following dose reduction reduce the dose to 50% of the original dose Stop treatment if a third event occurs following a 50% dose modification.

Hepatic Impairment

Drug	Bilirubin		AST	Dose (%of original dose)
Cisplatin	No adjustment necessary			
Etoposide	26-51	or	60-180	50
	more than 51	or	more than 180	clinical decision

Renal Impairment

Drug	Creatinine Clearance (ml/min)	Dose (% of original dose)
Cisplatin	more than 60	100
	45-59	75
	less than 45	Do not use
Etoposide	more than 50	100
	15-50	75
	less than 15	50

Other

Dose reductions or interruptions in therapy are not necessary for those toxicities that are considered unlikely to be serious or life threatening. For example, alopecia, altered taste or nail changes.

For all other non-haematological NCI-CTC grade 3 and above toxicities delay treatment until the adverse effect has resolved to NCI-CTC grade 1 or below. The dose of both agents should then be reduced to 75% of the original dose.

Cisplatin

Peripheral neuropathy is a common complication of cisplatin therapy. Where this occurs at NCI-CTC grade 2 or above delay treatment until resolution to NCI-CTC grade 1 or below and then restart treatment after reducing the cisplatin to 50% of the original dose (the etoposide remains at the previous level). Alternatively substitute the cisplatin with carboplatin AUC 6 for a calculated creatinine clearance or AUC 5 for an EDTA clearance.

Regimen

21 day cycle for 4 cycles

Drug	Dose	Days	Administration
Cisplatin	25mg/m^2	1, 2, 3	Intravenous infusion in 1000ml sodium chloride 0.9% with 20mmol potassium chloride at a maximum rate of 1mg cisplatin/minute (minimum time 60 minutes)
Etoposide	100mg/m^2	1, 2, 3	Intravenous infusion in 1000ml sodium chloride 0.9% over 60 minutes

Dose Information

- Cisplatin will be dose banded as per the CSCCN agreed bands
- Etoposide (intravenous) will be dose banded as per the CSCCN agreed bands

Administration Information

- The etoposide is administered in 1000ml sodium chloride. This will form the post-hydration for cisplatin. No other fluid is required as post-hydration

Extravasation

- Cisplatin – exfoliant
- Etoposide – irritant

Additional Therapy

- Antiemetics

  15-30 minutes prior to chemotherapy;

  - dexamethasone 8mg oral or intravenous bolus
  - ondansetron 8mg oral or intravenous bolus

  As take home medication;

  - dexamethasone 4mg once a day oral for 2 days starting the day after chemotherapy finishes
  - metoclopramide 10mg three times a day when required oral
  - ondansetron 8mg on the evening of each day of chemotherapy and then 8mg twice a day for two days starting the day after chemotherapy

- Cisplatin pre and post hydration as follows;

  Pre

  Furosemide 40mg when required oral or intravenous bolus

  500ml sodium chloride 0.9% with 8mmol magnesium sulphate over 30 minutes

  The etoposide is administered in 1000ml sodium chloride 0.9%. This forms the post hydration.

  Patients should be advised to drink at least 2 litres of fluid in the 24 hours after administration of cisplatin.

- Gastric protection with a proton pump inhibitor or a H_2 antagonist may be considered in patients considered at high risk of GI ulceration or bleed

- Prophylactic antibiotics can be considered if required

- Growth factors as per local policy

Coding (OPCS 4.6)

- Procurement – X70.1

- Delivery – X72.1, X72.4

References

1.National Institute of Clinical Excellence (2005). CG24. The Diagnosis and Treatment of Lung Cancer. Methods, Evidence and Guidance. DOH: London.

REGIMEN SUMMARY

Cisplatin-Etoposide IV

Days One, Two, Three

1. Dexamethasone 8mg oral or intravenous bolus

2. Ondansetron 8mg oral or intravenous bolus

3. Furosemide 40mg when required oral or intravenous bolus

4. Sodium chloride 0.9% 500ml with 8mmol magnesium sulphate over 30 minutes

5. Cisplatin 25mg/m^2 intravenous infusion in 1000ml sodium chloride 0.9% with 20mmol potassium chloride at a maximum rate of 1mg cisplatin/minute (minimum time 60 minutes)

6. Etoposide 100mg/m^2 in 1000ml sodium chloride 0.9% over 60 minutes

Take Home Medicines

7. Dexamethasone 4mg once a day for two days oral starting the day after chemotherapy finishes

8. Metoclopramide 10mg three times a day when required oral

9. Ondansetron 8mg on the evening of the days of chemotherapy and then 8mg twice a day for two days starting the day after chemotherapy finishes oral

DOCUMENT CONTROL

Version	Date	Amendment	Written By	Approved By
1.1	Dec 2013	Header changed Metoclopramide dose changed OPCS updated Hospitals and disclaimer added	Dr Deborah Wright Pharmacist	Donna Kimber Pharmacy Technician
1	July 2011	None	Dr Debbie Wright Pharmacist	Dr Andrew Bates Consultant Clinical Oncologist

This chemotherapy protocol has been developed as part of the chemotherapy electronic prescribing project. This was and remains a collaborative project that originated from the former CSCCN. These documents have been approved on behalf of the following Trusts;

Hampshire Hospitals NHS Foundation Trust
NHS Isle of Wight
Portsmouth Hospitals NHS Trust
Salisbury Hospitals NHS Foundation Trust
University Hospital Southampton NHS Foundation Trust
Western Sussex Hospitals NHS Trust

All actions have been taken to ensure these protocols are correct. However, no responsibility can be taken for errors which occur as a result of following these guidelines.