Systemic Anti Cancer Treatment Protocol

Cisplatin with radiotherapy
Urology

PROCTOCOL REF: MPHACISRU
(Version No: 1.0)

Approved for use in:

Chemo-radiotherapy for muscle invasive bladder cancer

As possible alternative to standard mitomycin C and fluorouracil in patients with cardiac contraindications

Dosage:

Drug	Dose	Route	Frequency
Cisplatin	**30mg/m^2**	IV infusion	Every 7 days

For 4 or 6 doses, depending on the radiotherapy schedule

Radiotherapy: 55Gy in 20# (4 x weekly cisplatin infusions) or 64Gy in 32# (6 x weekly cisplatin infusions).

Supportive treatments:

Dexamethasone 4mg oral tablets twice daily for 3 days

Domperidone 10mg three times a day when required

Extravasation risk:

Cisplatin: Injection site reactions may occur during the administration of cisplatin. Given the possibility of extravasation, it is recommended to closely monitor the infusion site for possible infiltration during drug administration.

Cockroft and Gault formula

Male patients $\frac{1.23 \times (140 - \text{age}) \times \text{weight (kg)}}{\text{Serum Creatinine (micromol/L)}}$

Female patients $\frac{1.04 \times (140 - \text{age}) \times \text{weight (kg)}}{\text{Serum Creatinine (micromol/L)}}$

Administration:

- **Review patient's fluid intake over the previous 24 hours**
- **Review common toxicity criteria and performance status**
- **Calculate creatinine clearance using Cockroft and Gault equation**

Day	Drug	Dose	Route	Diluent and rate
1	**Dexamethasone** 30mins before chemotherapy	**8mg**	**PO**	
	Ondansetron 30mins before chemotherapy	**16mg**	**PO**	
	Cisplatin	**30mg/m^2**	**IV**	Sodium Chloride 0.9% 1000mL over 60 minutes

Main toxicities:

Cisplatin	
Haematological	Bone marrow failure, thrombocytopenia, leukopenia, anaemia
Hepatobiliary	Hepatic enzymes increased, blood bilirubin increased
Gastrointestinal	Vomiting, nausea, diarrhoea

Cardiac disorders	Arrhythmia, bradycardia, tachycardia
Nephrotoxicity	Urine output of 100 mL/hour or greater will help minimise cisplatin nephrotoxicity
Neuropathies	May be irreversible and may manifest by paresthesia, loss of muscle reflex and a sensation of vibrations. A neurologic examination must be carried out at regular intervals.
Ototoxicity	Observed in up to 31% of patients can be unilateral or bilateral and tends to become more frequent and severe with repeated doses; consider audiometry and referral to ENT specialist
Additional side effects	Loss of fertility Anaphylactic reactions

Investigations:

	Pre	Week 1	Week 2	Ongoing
Medical Assessment	X			As for radiotherapy review
Nursing Assessment		X	X	Every week
FBC	X	X	X	Every week
U&E & LFTs	X	X	X	Every week
CT scan	X			As clinically indicated
Informed Consent	X			
Blood pressure measurement	X			Repeat if clinically indicated
PS recorded	X	X	X	Every week
Toxicities documented	X	X	X	Every week
Weight recorded	X	X	X	Every week

Dose Modifications and Toxicity Management:

If patient develops Grade 2 neuropathy or ototoxicity discuss with consultant.

Consider radiotherapy alone or change in treatment plan for intolerable grade 2 or any grade 3 toxicities.

Haematological toxicity

Proceed on day 1 if-

ANC ≥ 1.0 x 10^9/L	Plt ≥ 100 x 10^9/L

Omit on day 1 if-

ANC ≤ 0.9 x 10^9/L	Plt < 100 x 10^9/L

Hepatic impairment:

Cisplatin
No dose reduction necessary.

Renal Impairment:

Cisplatin: CrCl (mL/min)	**Dose**
Above 60	100% dose
45 to 59	75% dose
Below 45	Refer patient to treating consultant oncologist for treatment review

References:

Cisplatin 1 mg/ml Sterile Concentrate, Summary of Product Characteristics Hospira UK Ltd Warwickshire.06/09/1996. Available from www.medicines.org.uk/emc/medicine. Last updated 30/04/2013.

Dosage Adjustment for Cytotoxics in Hepatic Impairment . January 2009 UCLH (Version 3 - updated January 2009)

Dosage Adjustment for Cytotoxics in Renal Impairment. January 2009 UCLH (Version 3 - updated January 2009)

Managing locally advanced or metastatic bladder cancer. NICE guideline NG2. Feb 2015. Available from pathways.nice.org.uk/pathways/bladder-cancer.