

CISPLATIN METHOTREXATE BLEOMYCIN (PMB)

INDICATION (ICD10) C60

Adjuvant or metastatic penile cancer. PS 0, 1, 2

REGIMEN

Day 1 Prehydration
CISPLATIN 75mg/m² in 1000ml sodium chloride 0.9% IV infusion over 2 hours
METHOTREXATE 25mg/m² IV bolus
BLEOMYCIN 10000units IV in 100ml infusion over 30 minutes
Post hydration

Day 8 METHOTREXATE 25mg/m² IV bolus
BLEOMYCIN 10000units IV in 100ml infusion over 30 minutes

CYCLE FREQUENCY AND NUMBER OF CYCLES

Every 21 days

ANTI-EMETICS

High emetic risk day 1

Low emetic risk day 8

CONCURRENT MEDICATION REQUIRED

Cisplatin	Ensure adequate pre and post hydration. If urine output is <100ml/hour or if patient gains >2kg in weight during IV administration post cisplatin give 20-40 mg furosemide PO/IV.
Methotrexate	Calcium folinate (calcium leucovorin (15mg) PO/IV every 6 hours for 6 doses starting 24 hours after methotrexate if: Pleural effusions/ascites Previous mucositis Serum creatinine >120micromols/L

EXTRAVASATION AND TYPE OF LINE / FILTERS

Bleomycin – neutral

Cisplatin – exfoliant

Methotrexate – inflammitant

Peripheral line

INVESTIGATIONS

Blood results required before SACT administration

FBC, U&E and LFTs every cycle

Neutrophils x 10⁹/L ≥1.5

Platelets x 10⁹/L ≥100

Ideally EDTA GFR should be used

Creatinine clearance (GFR) calculated, at the Consultants discretion

Serum creatinine - each cycle

Pulmonary function tests (including transfer factor) before cycle 1

Baseline weight and every cycle

MAIN TOXICITIES AND ADVERSE REACTIONS

Bleomycin	If breathlessness or infiltrates appear not attributable to tumour or co-existence of lung disease bleomycin must be stopped immediately. Consider treatment with corticosteroids and a broad spectrum antibiotic and / referral to chest team. Investigation of choice high resolution CT chest.
Cisplatin	Nephrotoxicity – ensure adequate pre and post hydration is prescribed. Ototoxicity – assess patient for tinnitus or hearing abnormalities.
Methotrexate	Methotrexate induced mucositis - folinic acid (calcium folinate) rescue Caution with pleural effusions or ascites

INTERACTIONS WHICH MAY REQUIRE DOSE MODIFICATIONS

(not exhaustive list check SPC/BNF/Stockleys)

Bleomycin	Cisplatin increases the risk of pulmonary toxicity.
Cisplatin	Aminoglycosides increased risk of nephrotoxicity and ototoxicity. Renal function should be well monitored and audiometric tests as required. Cisplatin can cause a decrease in phenytoin serum levels. This may lead to reappearance of seizures and may require an increase of phenytoin dosages.
Methotrexate	NSAIDs, antibiotics: may reduce renal excretion

DOSE MODIFICATIONS

Bleomycin maximum lifetime dose = 400000units in patients under 60 years

Non-haematological

Cisplatin

If patient complains of tinnitus, tingling of fingers and/or toes, discuss with SpR or Consultant before administration.

Hepatic impairment

Methotrexate

Bilirubin >85micromol/L	omit
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Renal impairment

Bleomycin

CrCl >50ml/min	give 100% dose
CrCl 10-50ml/min	give 75% dose
CrCl <10ml/min	give 50% dose

Cisplatin

CrCl >60ml/min	give 100% dose
CrCl 45-60ml/min	give 75% dose
CrCl <45ml/min	not recommended

Methotrexate

GFR 20-50mL/min	give 50% dose
GFR <20mL/min	omit dose

REFERENCES

1. Haas et al. J Urol 1999; 161: 1823-5