

BEP15

(Bleomycin, etoposide, cisplatin)

Indication

Germ cell tumour with poor prognosis (for use following induction with CBOP regimen only)

Regimen details

Day	Drug	Fluid	Time
1	Etoposide 100mg/m ²	1 litre sodium chloride 0.9%	1 hour
	20mmol Potassium chloride + 10mmol Magnesium sulphate	1 litre Sodium chloride 0.9%	2 hours
	Cisplatin 20mg/m ²	500ml Sodium chloride 0.9%	1 hour
	20mmol Potassium chloride + 10mmol Magnesium sulphate	1 litre Sodium chloride 0.9%	2 hours
2	Hydrocortisone 200mg IV bolus		
	Bleomycin 15,000 units	250ml Sodium chloride 0.9%	30 min
	Etoposide 100mg/m ²	1 litre Sodium chloride 0.9%	1 hour
	20mmol Potassium chloride + 10mmol Magnesium sulphate	1 litre Sodium chloride 0.9%	2 hours
	Cisplatin 20mg/m ²	500ml Sodium chloride 0.9%	1 hour
	20mmol Potassium chloride + 10mmol Magnesium sulphate	1 litre Sodium chloride 0.9%	2 hours
3	Etoposide 100mg/m ²	1 litre Sodium chloride 0.9%	1 hour
	20mmol Potassium chloride + 10mmol Magnesium sulphate	1 litre Sodium chloride 0.9%	2 hours
	Cisplatin 20mg/m ²	500ml Sodium chloride 0.9%	1 hour
	20mmol Potassium chloride + 10mmol Magnesium sulphate	1 litre Sodium chloride 0.9%	2 hours
4	Etoposide 100mg/m ²	1 litre Sodium chloride 0.9%	1 hour
	20mmol Potassium chloride + 10mmol Magnesium sulphate	1 litre Sodium chloride 0.9%	2 hours
	Cisplatin 20mg/m ²	500ml Sodium chloride 0.9%	1 hour
	20mmol Potassium chloride + 10mmol Magnesium sulphate	1 litre Sodium chloride 0.9%	2 hours
5	Etoposide 100mg/m ²	1 litre Sodium chloride 0.9%	1 hour
	20mmol Potassium chloride + 10mmol Magnesium sulphate	1 litre Sodium chloride 0.9%	2 hours
	Cisplatin 20mg/m ²	500ml Sodium chloride 0.9%	1 hour
	20mmol Potassium chloride + 10mmol Magnesium sulphate	1 litre Sodium chloride 0.9%	2 hours

Day	Drug	Fluid	Time
8	Hydrocortisone 200mg IV bolus		
	Bleomycin 15,000 units	250ml Sodium chloride 0.9%	30 minutes
15	Hydrocortisone 200mg IV bolus		
	Bleomycin 15,000 units	250ml Sodium chloride 0.9%	30 minutes

Cycle frequency

Every 21 days

Number of cycles

3 cycles

Administration

Strict fluid balance

Consider frusemide 20-40mg p.o/IV if >1000ml positive balance

Do not wait for results of FBC prior to giving day 8, 15 treatments unless patient looks unwell or is pyrexial.

Pre-medication

Hydrocortisone 200mg IV bolus before bleomycin

Emetogenicity

Highly emetogenic (days 1-5)

Minimally emetogenic (days 8 & 15)

Additional supportive medication

Filgrastim 5mcg/kg sc daily for 7 days starting day 7

Investigations – pre first cycle

Creatinine clearance

FBC, U&E, LFT incl. LDH, Uric Acid, Mg, Ca, AFP, bHCG

Investigations –pre subsequent cycles

Weekly:

FBC

U&E, LFT incl. LDH, Uric Acid, Mg, Ca, AFP, bHCG

Day 1 only:

Chest X-ray (if metastases present or primary mediastinal germ cell tumour)

Measured GFR only if calculated clearance <60 ml/min (Cockcroft formula)

Do not wait for results of FBC prior to giving day 8, 15 treatments unless patient looks unwell or is pyrexial.

Standard limits for administration to go ahead

Any Hb (transfuse if < 9.0g/dl)

Platelets > 50 (contact consultant if lower!)

WCC > 1.5 or Neutrophils > 0.5

Creatinine clearance ≥ 50ml/min

ANY DEFERRAL NEEDS TO BE DISCUSSED WITH CONSULTANT AS TREATMENT DELAYS HAVE NEGATIVE EFFECT ON OUTCOME

Dose modifications

GFR < 50ml/min or Neurotoxicity > grade 2
Replace Cisplatin with Carboplatin AUC 6

Bleomycin rash/lung toxicity, omit Bleomycin, get HRCT urgently

Adverse effects –

[for full details consult product literature/ reference texts](#)

Nausea/vomiting
Alopecia
Infertility (some reversibility within 2 years of treatment)
Mucositis
Cough/SOB (watch out for bleomycin pneumonitis!)
Skin rash
Peripheral neuropathy
Ototoxicity (tinnitus/deafness)
Renal toxicity, electrolyte disturbance (especially magnesium loss)
Myelosuppression

THIS PROTOCOL HAS BEEN DIRECTED BY DR BIRTLE, DESIGNATED LEAD CLINICIAN FOR GERM CELL TUMOURS

RESPONSIBILITY FOR THIS PROTOCOL LIES WITH THE HEAD OF SERVICE

Date: July 2020
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