STREPTOZOCIN CISPLATIN FLUOROURACIL (FCiST)

INDICATION (ICD10) M-8246/3

1. Neuroendocrine tumour (unlicensed indication)
PS 0, 1, 2

REGIMEN

Day 1 Prehydration
STREPTOZOCIN* 1000mg/m^2 in 250ml sodium chloride 0.9% IV infusion over 1 hour
CALCIUM FOLINATE 45mg** in sodium chloride 0.9% infusion over 30 minutes
FLUOROURACIL 500mg/m^2 IV bolus
CISPLATIN 70mg/m^2 in 1000ml sodium chloride 0.9% IV infusion over 2 hours
Posthydration

*Named patient medicine
**Patients with a BSA >2m^2 calcium folinate dose should be 20mg/m^2
NB Calcium folinate, folinic acid, leucovorin, calcium leucovorin are all equivalent and NOT the same as Calcium levofolinate. Calcium levofolinate is the single isomer of folinic acid and the dose is generally half that of calcium folinate.

CYCLE FREQUENCY AND NUMBER OF CYCLES

Every 21 days for 6 cycles

ANTI-EMETICS

High risk day 1

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 20-40mg furosemide PO/IV.
Fluorouracil	Mouth and bowel support eg Loperamide, benzydamine mouthwash
Streptozocin	Ensure adequate hydration.

EXTRAVASATION AND TYPE OF LINE / FILTERS

Cisplatin – exfoliant
Streptozocin – vesicant

Peripheral line

INVESTIGATIONS

Blood results required before SACT administration
FBC, U&E and LFTs every cycle
Neutrophils x 10^9/L ≥1.5
Platelets x 10^9/L ≥100
Ideally EDTA GFR should be used
Creatinine clearance (GFR) calculated, at the Consultants discretion
Serum creatinine - GFR each cycle
DPD test
Baseline weight and every cycle

MAIN TOXICITES AND ADVERSE REACTIONS

Cisplatin	Nephrotoxicity – ensure adequate pre and post hydration is prescribed. Ototoxicity – assess patient for tinnitus or hearing abnormalities.
Fluorouracil	Palmar plantar (handfoot syndrome) causing red palms and soles – treat with pyridoxine 50mg tds Diarrhoea – treat with loperamide or codeine Cardiotoxicity – monitor cardiac function. Special attention is advisable in treating patients with a history of heart disease, arrhythmias or angina pectoris or those who develop chest pain during treatment with fluorouracil. Stomatitis
Streptozocin	Burning along veins during rapid infusion Severe hyperglycaemia. Monitor BMs if signs of hyperglycaemia occur. Associated with renal tubule toxicity, hepatotoxicity and anaemia. Renal toxicity

INTERACTIONS WHICH MAY REQUIRE DOSE MODIFICATIONS
(not exhaustive list check SPC/BNF/Stockleys)

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.
Fluorouracil	Cimetidine slightly increases exposure to fluorouracil Metronidazole increased toxicity Phenytoin concentration increased Warfarin
Streptozocin	Many interactions, check carefully

DOSE MODIFICATIONS

Hepatic impairment

Fluorouracil

Bilirubin >85micromol/L or ALT/AST >180	not recommended

Renal impairment

Cisplatin

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

Streptozocin

CrCl >60ml/min	give 100% dose
CrCl 46-60ml/min	give 50% dose
CrCl 31-45ml/min	Evaluation of risk / benefit
CrCl <30ml/min	contraindicated

REFERENCES

1. Eriksson. B., Oberg. K. 1993 An update of medical treatment of malignant endocrine pancreatic tumours. Acta Oncol. 32: 203-208