**Oncology / Hematology clinical Notes**

**How can we prevent / treat nephrotoxicity of cisplatin ?**

1. Aggressive hydration pre & post dose of cisplatin 2-3L/day
2. Diuretics to increase renal clearance ,mannitol (preferred) 12.5-50g/dose cisplatin, and we can use furosemide also .
3. Amifostine as treatment 910 mg/m2, monitor BP(hypotension) and Ca level.
4. Avoid other nephrotoxic drugs (aminoglycosides ,NSAIDs)

**Myelosuppression** is a common toxicity of anti cancer drugs because the bone marrow is a rapidly proliferating tissue Other rapidly proliferating cells that are affected include: a. GI epithelium b.Hair follicles

 drugs for which bone marrow depression is **not** the dose-limiting toxicity include:

Hormones ii. Vincristine iii. Bleomycin iv. Asparaginase v. Cisplatin vi. Monoclonal antibodies (MAbs)

Max dos of **Rituximab** is 400 mg/h , starting with 5o mg/h and taper 50 mg intervals.

**Metoclopramide** max dose is 40 mg /days or ,5mg/kg/day, doses more than 40 mg/day increase the risk of Extra pyramidal S.E

**Filgrastim** (neupogen) G-CSF Dose : 5-9mcg/kg/day up to 14 days or ANC >10,000, side effects :bone and back pain,

**Allopurinol** (300mg) is used for prophylaxis of TLS even if uric acid level is normal ,and if it occurs treated with rasburicase .

Drugs that can be given intrathecaly are :

MTX , Cytarabine , and hydrocortisone .

drugs that are recommended in bone metastasis:

Bone metastases occur in approximately 70% of patients with mets breast CA

zoledronic acid (zomera) 4 mg IV in N/S over 15-30 min q 4 weeks.

pamidronate 90 mg over 2-hour infusion

Denosumab (xgeva) 120mg S.C

B-cell symptoms (lymphoma):

a.Weight loss .b night sweating .c fever .

non-classical symptoms of CA pts: anorexia ,weight loss & anemia

most of SCLC patients come with metastatic disease

Hodgkin lymphoma diagnosis is confirmed by the presense of REED-STERRBERG cells. ABVD Protocol is used for RX.

Adriamycin ,bleomycin,vinblastine ,dacarbazine ,on days 1 , 15 q 28 days for 6-8 cycles.

How is prednisolone given in R-CHOP protocol. 100 mg po for 5 days.

**COMMON CHEMOTHERAPY ABBREVIATIONS**

**BREAST CANCER**

TAC : Docetaxel, Adriamycin, Cyclophosphamide

FEC : 5Fluorouracil, Epirubicin, Cyclophosphamide

AC : Adriamycin, Cyclophosphamide

**COLO-RECTAL CANCER**

FOLFOX : Oxaliplatin, Continious infusion 5Fluorouracil and Leucovorin

XELOX : Oxaliplatin, Capecitabine

FOLFIRI : Irinotecan, Continious infusion 5 Fluorouracil and Leucovirin

XELIRI : Irinotecan, Capecitabine

**GASTRIC/LOWER OESOPHAGEAL**

ECF : Epirubicin, Cisplatin, 5 Fluorouracil

ECX : Epirubicin, Cisplatin, Capecitabine

EOX : Epirubicin, Oxaliplatin, Capecitabine

**HEAD AND NECK CANCER**

TPF : Docetaxel, Cisplatin, 5 Flurouracil

**TESTICULAR CANCER**

BEP : Bleomycin, Etoposide, Cisplatin

TIP : Ifosfamide, Paclitaxel, Cisplatin

**Potential Vesicants**:

|  |  |
| --- | --- |
| Dactinomycin | Epirubicin |
| Daunorubicin | Streptozocin |
| Doxorubicin | Vinblastine |
|  |  |
|  |  |
|  |  |
| Idarubicin | Vincristine |
| Mechlorethamine  |  Paclitaxel |
|  |
| **Potential Irritants**: |
| Carmustine | Etoposide |
| Cisplatin | Mitoxantrone |
| Dacarbazine | Melphalan |
| Vinorelbine | Vindesine |
| Cyclophosphamide |  Teniposide |

**Suggested Procedures for Management of Extravasation of Vesicant Drugs**

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| 1. Stop the injection immediately, but do not remove the needle. Any drug remaining in the tubing or needle, as well as the infiltrated area, should be aspirated.
2. Contact a physician as soon as possible.
3. If deemed appropriate, instill an antidote in the infiltrated areas (via the extravasated intravenous if possible).
4. Remove the needle.
5. Apply ice to the site and elevate the extremity for the first 24–48 hr (if vinca or podophyllotoxin, use warm compresses).
6. Document the drug, suspected volume extravasated, and the treatment in the patient's medical record.
7. Check the site frequently for 5–7 days.

**Cancer Chemotherapeutic Agents Commonly Causing Hypersensitivity**a. L-Asparaginase b. Paclitaxel c. Teniposide d. Bleomycin e. Rituximab f. Trastuzumab g. Cetuximab**Emetogenic potential of chemotherapy agents**High : Cisplatin >50mg/m2 , Dacarbazine , Cyclophos>1.5g/m2. Low : Vincristine , Bevacizumab , Bleomycin .\*Acute or early nausea and vomiting- within 24 hours of chemotherapy.\*delayed/late – after 24 hours of chemotherapy. \*Anticipatory nausea and vomiting- Nausea before chemotherapy +**How we can prevent the cardio-toxicity with doxorubicin?**1) more frequent, smaller doses 2) liposomal pegylated doxorubicin may be similar to conventional doxorubicin with decreased cardiotoxicity 3) Dexrazoxane is a chemoprotectant that reduces the incidence and severity of cardiomyopathy. It is indicated in women with metastatic breast cancer who have received a cumulative doxorubicin dose of 300 mg/m2. The recommended dosing ratio of dexrazoxane:doxorubicin is 10:1 slow IV push 30 minutes before starting doxorubicin. 4) avoid other cardio toxic drugs .  |

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 **Chemotherapeutics and Targeted Agents Requiring Dosage Modifications or Dosage Omissions in Renal Insufficiency**

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| BleomycinCapecitabineCarboplatinCarmustineCisplatinCytarabineDacarbazineFludarabine | IfosfamideLomustineMelphalanMethotrexateMitomycinPemetrexedPentostatinTopotecan |

**Common Causes of Elevated LFT in Patients With Cancer**

Primary or metastatic tumor involvement of the liver

Hepatotoxic drugs (e.g., cytotoxics, hormones [estrogens, androgens], antimicrobials [trimethoprim-sulfamethoxazole, voriconazole])
Infections (e.g., hepatic candidiasis, viral hepatitis)
Parenteral nutrition
Portal vein thrombosis
Paraneoplastic syndrome
History of liver disease (including hepatitis B and C)

**Risk Factors Associated With Development of Breast Cancer**:

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| 1. History of breast cancer
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| 1. Family history of breast cancer, especially in first-degree relatives
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| 1. Benign breast “cancer” (i.e., atypical hyperplasia)
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| 1. Early menarche, late menopause
 |
| 1. Late first pregnancy greater than no pregnancy
 |
| 1. Advancing age
 |

**Topical Medications for Oral Complications of Chemotherapy and Radiation Therapy**:

Xerostomia: Pilocarpine 5-mg tablet 1–2 tablets TID to QID.

Saliva substitutes and/orSugar-free hard candy; sugar-free gum; ice chips.

General infection: Chlorhexidine gluconate 0.12% oral rinse. Rinse BID after breakfast and at HS for 30 sec; do not swallow.

Prevention and treatment of oral candidiasis: Nystatin oral suspension Rinse and swallow (if tolerated) 500,000–1,000,000 units TID to QID.