

“12 MAHINE : 12 POSTERS”

Pediatric Oncological Emergencies - Anticipation and Early Recognition Improves Survival

- ◆ Pediatrician Plays a Key Role - First Point of Contact
- ◆ It Can Present at Diagnosis or During Treatment
- ◆ Prompt Recognition and Treatment is Key to Success

DISEASE RELATED

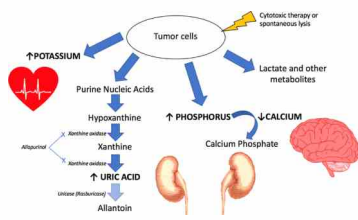
- ◆ Superior Mediastinal Syndrome/SVC Syndrome
- ◆ Hyperleukocytosis
- ◆ Tumor Lysis Syndrome
- ◆ Spinal Cord Compression Syndrome
- ◆ DIC

TREATMENT RELATED

- ◆ Febrile Neutropenia
- ◆ Typhlitis
- ◆ PRES, Seizures, Stroke
- ◆ Pancreatitis
- ◆ Chemotherapy Extravasation & Anaphylaxis

Tumor Lysis Syndrome

Why it Happens



Who are at risk

- ◆ Acute Lymphoblastic Leukemia (ALL) (WBC > 1 lakh per cmm)
- ◆ Acute Myeloid Leukemia (AML) (WBC > 50,000 per cmm)
- ◆ Burkitt Lymphoma
- ◆ Lymphoblastic Lymphoma

Clinical Features

Laboratory Criteria

- Hyperuricemia
- Hyperkalemia
- Hyperphosphatemia
- Hypocalcemia

Clinical Criteria

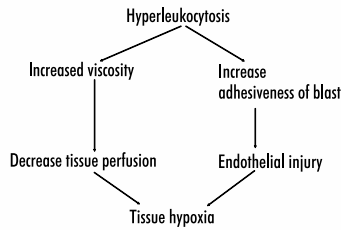
- Acute Kidney Injury
- Seizures
- Arrhythmias
- Sudden death

Treatment

- ◆ Hyperhydration @ 3L/m2/Day and Target Urine output > 2-4 ml/kg/hour
- ◆ Hyperuricemia - Allopurinol or Rasburicase
- ◆ Avoid Potassium Containing Drinks & Food
- ◆ Correct Hyperkalemia Promptly
- ◆ Hypocalcemia - Treat Only if Symptomatic
- ◆ Phosphate Binders

Hyperleukocytosis

Why it Happens



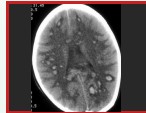
Who are at Risk

- ◆ (ALL) (WBC > 1 lakh per cmm)
- ◆ (AML) (WBC > 50,000 per cmm)

Clinical Features



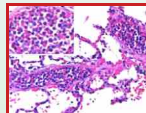
- ##### Pulmonary
- ◆ Dyspnea
 - ◆ Hypoxia
 - ◆ Diffuse Alveolar Haemorrhage
 - ◆ Respiratory Failure



- ##### CNS
- ◆ Confusion
 - ◆ Drowsiness
 - ◆ Haemorrhage
 - ◆ Coma
 - ◆ Focal Neurological Deficit



- ##### Eyes
- ◆ Blurred Vision
 - ◆ Retinal Haemorrhage
 - ◆ Retinal Vein Thrombosis

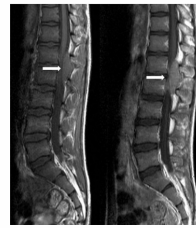


- ##### Others
- ◆ Dactylitis
 - ◆ Priapism
 - ◆ Thrombosis and Ischemia
 - ◆ DIC
 - ◆ AKI

Treatment

- ◆ Hydration
- ◆ Cytoreductive Therapy - Chemotherapy or Steroids
- ◆ Monitor and Treat TLS
- ◆ Avoid Packed Red Cell Transfusion and Diuretics
- ◆ Platelet Transfusion to Keep Platelet Count More Than 30,000 Per cmm
- ◆ Leukapheresis/Exchange Transfusion

Spinal Cord Compression



Why it Happens

- ◆ Direct Compression by a Tumour or Due to Vasogenic Edema
- ◆ Presenting Symptom in 2-5% Patients with Cancer
- ◆ MRI is Imaging of Choice

Who are at Risk

- ◆ Ewing Sarcoma
- ◆ Neuroblastoma
- ◆ Soft Tissue Sarcoma
- ◆ Hodgkin and NHL

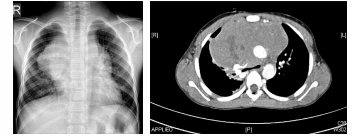
Clinical Features

- ◆ Back Pain
- ◆ Radicular Pain
- ◆ Bladder/bowel Involvement
- ◆ Motor/Sensory Loss

Treatment Options

- ◆ Urgent Diagnosis and Treatment
- ◆ Dexamethasone - Drug of Choice
- ◆ Laminectomy
- ◆ Early initiation of Chemotherapy
- ◆ Laminectomy / Radiotherapy if no Response to above

Superior Mediastinal Syndrome



- ◆ Superior Vena Cava Syndrome - Mediastinal Mass Causing Compression or Obstruction of SVC
- ◆ Superior Mediastinal Syndrome - SVC Syndrome + Airway Compression

Who are at Risk

Anterior Mediastinum (More Likely)	Posterior Mediastinum
<ul style="list-style-type: none"> ◆ Lymphoma - Hodgkin & Non Hodgkin? ◆ Germ cell Tumor ◆ Thymoma 	<ul style="list-style-type: none"> ◆ Neuroblastoma ◆ Bone tumors

Clinical Features

Airway compression	Cough, Orthopnea, Dyspnea
Esophageal Compression	Dysphagia
Nerve compression	Vocal Cord Paralysis (Hoarseness of voice), Horner's Syndrome
SVC obstruction	Facial Plethora, Cyanosis, Puffiness, Dilated Neck Veins and Thoracic Vein, Upper Limb Edema, Headache

Treatment

- ◆ DO NOT LIE FLAT/SUPINE
- ◆ DO NOT SEDATE for any Imaging or Procedures
- ◆ IV Line in Lower Limb
- ◆ Diagnosis Through Least Invasive Method
- ◆ Avoid Muscle Relaxants
- ◆ Empiric Treatment in Severe Respiratory Distress - Steroids/ Radiotherapy

Key Message

- ◆ Be Vigilant
- ◆ Time is Critical
- ◆ Act Quickly
- ◆ Stabilise First and Refer Early



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