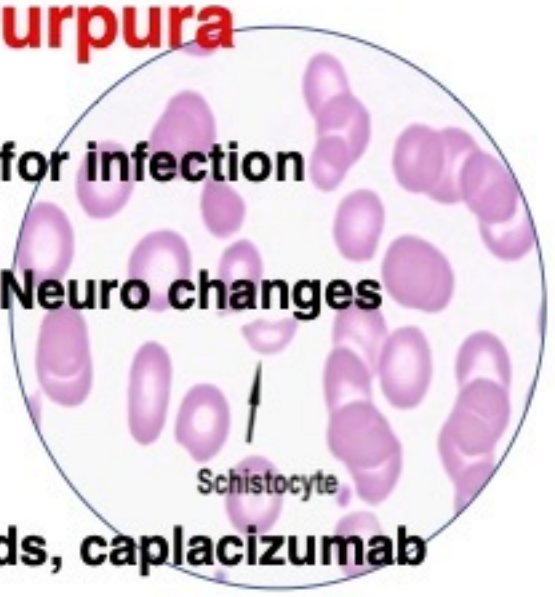
HEMATOLOGIC EMERGENCIES

Thrombotic Thrombocytopenic Purpura

TTP



High mortality - Patients appear septic, mistaken for infection

FAT RN – Fever, Anemia, Thromboctyopenia, Renal, Neuro changes

Schistocytes. ADAMSTS13 level

Tx: HD catheter placement for plasmapheresis. Steroids, caplacizumab

"If TTP is top of Ddx, PLEX now and ask questions later"

Immune Thrombocytopenic Purpura

ITP

Non - Toxic appearing

Low risk of severe bleeding. Mortality 0.3 - 5%

Mucosal bleeding most common – Epistaxis, gums

Associations - Viral infection, H. pylori, HIV, Hep C, CVID, APA syndrome

Tx: Steroids, IVIG, Rituximab, Cyclophosphamide, Vincristine

Tumor Lysis Syndrome

TLS

1-5 days after initiation of chemotherapy

"Liquid Tumors" more common

Rapid cell turnover → ⇧ potassium ⇧ phosphate ⇩ calcium ⇧ uric acid

Tx: Aggressive Hydration. Allopurinol + Rasburicase if hyperuricemic

BUMC EMERGENCY MEDICINE

Credit: Benjamin Kitchens MD, Karina Reyner MD, Robert Barnes, MD

HEMATOLOGIC EMERGENCIES

Leukostasis

WBC > 100,000 in AML or CML w/ Blast crisis

CNS and Pulmonary are most affected

Leukocyte Larceny - ABG with false hypoxemia – SpO2 more reliable

Tx: Antibiotics, Hydration, Chemo, Leukapheresis, Hydroxyurea

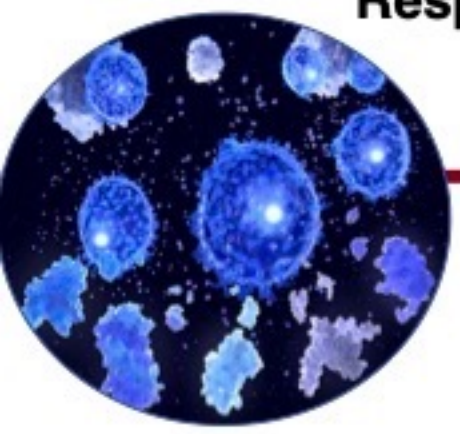
Differentiation Syndrome

APML patient on ATRA or ATO therapy → Pulmonary infiltrates

Causes APML blasts to differentiate into granulocytes → cytokine storm

10 days after therapy

Respiratory symptoms, failure, Pneumonia-like picture



Tx: Steroids

Cytokine Release Syndrome

Occurs with CAR-T therapy

High tumor burden - Can occur within week to months after therapy

Systemic inflammatory response → Multi-organ system dysfunction

Tx: Steroids, Tocilizumab

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