08/09/21 Morning Report with @CPSolvers

Case Presenter: *Franco Murillo (@FrancoMurilloCh)* ***Case Discussants***: *Dhruv Srinivasachar (@TheRealDSrini)*

CC: Fever and epistaxis

HPI: 58F female with fever and epistaxis
2 weeks of fever, 2 recent episodes of epistaxis. On the day of admission: Pt p/w gingival bleeding after eating, no n/v, no bone pain or any other symptom. Only malaise with fever

PMH: CAP 1 year prior

Meds: None

Fam Hx: Father died of pancreatic cancer

Soc Hx:

Health-Related Behaviors:

Allergies:

Vitals: **T**: 37 **HR**:96 **BP**:100/70 **SpO_2**: 98%
Exam:
Gen: Not ill appearing, no oral ulcer
HEEN, CV: wnl
Pulm: wnl
Abd: no tenderness, no guarding, no rebound, no organomegaly
Neuro: Unremarkable
Extremities/Skin: Multiple petechiae in lower extremities

Notable Labs & Imaging:
Hematology:
WBC: 5500 Mild lymphopenia, 4% atypical lymphocytes Hgb: 9.3 MCV:93 MCH: 29 Plt: 1000
Chemistry:
AST: 38 ALT: 105 T. Bili:N Albumin: N INR: 1.16 Ca: Normal
Peripheral smear: atypical lymphocytes, low plat
LDH: 304 Coombs direct and indirect negative Reticuloculocites: 1.4%
B12 folic acid wnl
ESR 15, HIV ne, Hep Neg, EBV negative, CMV: indeterminate IgG, IgM
Iron studies: Iron deficiency
Flow cytometry: no lymphoproliferative , myelogram: hypocellular bone marrow, megakaryocyte, severe plaquetopenia

Steroids for presumed ITP, IVGG not done due to insurance
CMV: positive IgM Viral: 29000 Antiplatelets: negative
Refractory to steroids and responded to IVGG

DX: Cytomegalovirus-induced ITP

Problem Representation: 58 F p/w fever and epistaxis. Physical exam is normal except for multiple petechiae in lower extremities. Low platelets, Hb and 4% atypical lymphocytes. BM: hypocellular, megakaryocyte and plaquetopenia. DX: Cytomegalovirus-induced ITP

Teaching Points (Gabriel):

- **Epistaxis ddx:**
  - **Anatomical:** fragile vessels, dry mucosa.
  - **Primary hemostasis problem**
    - Quantitative: sequestration: splenomegaly, increased consumption or loss: TTP, DIC, Inmune (ITP, meds, HIV, SLE, HCV, lymphoproliferative disorders)
    - Qualitative (meds, uremia, myeloproliferative disorders, congenital: vWF disease, glanzmann, bernard soulier)
  - **Secondary hemostasis problem**
- **Collecting clues:**
  - + fever: autoimmune conditions, malignancy, infections leading to coagulation disorders.
  - +gingival bleeding and petechiae: point toward a primary hemostasis problem.
  - + normocytic anemia: BM causes (malignancy, nutritional deficiency) vs peripheral (MAHA: TTP, HUS, DIC). Keep in mind these could be separate process.
    - *If there´s no clear etiology for a bicytopenia, perform a BM biopsy*
  - Anemia being explained by iron deficiency, BM biopsy and flow cytometry showing no signs of lymphoproliferative disorders → ITP on the top
    - In comparison w/ lymphoproliferative disorders, the thrombocytopenia induced by ITP tends to be more dramatic
    - Infections associated with ITP: HIV, HBV, HCV, CMV, EBV, H.pylori.
    - CMV mononucleosis is usually self limited.