05/05/21 Morning Report with @CPSolvers

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CC: Rash on legs

HPI: 83 year old M with recent hospitalizations for heart failure. Itchy & tender rash on legs for 1 month, started in legs, now on abdomen.
No new medications/laundry detergents.

PMH:
Heart Failure - ischemic (diagnosed couple of years ago), HTN, HLD, mild cognitive impairment, BPH

Meds:
Finasteride
Amlodipine
Furosemide
Metoprolol
Quetiapine
Atorvastatin

Fam Hx:N/A

Soc Hx: From Dominacan Republic - moved in 80's

Health-Related Behaviors:
Remote smoking hx. No alcohol, drug use

Allergies:
NKDA

Vitals: **T**: **HR**: **BP**: **RR**: **SpO_2**:
Exam: **CV**: Normal
Pulm: CTAB
Abd: soft, non-tender
Neuro: alert and oriented x3
Extremities/Skin: 1+ pitting edema in bilateral LE
Faint blue-grey discoloration in bl temples/cheeks. Scattered erythematous to violaceous non-blanching macules on abdomen. Back and upper extremities clear. Lower extremities - erythematous to violaceous non blanching macules and thin papules

Notable Labs & Imaging:
Hematology: WBC: 6.1 (83.8% N, 12.1% L, 3.4% M, 0.2 E, 0.2 B) Hgb: 8.2 MCV 98 Plt: 246

Chemistry: Na: 139 K: 4.7 Cl: 102 CO2: 26 BUN: 26 Cr: 1.4 (baseline 1) Ca: 8.5 Phos: 3.5 Mag: 1.8
AST: 36 ALT: 17 T. Bili: 0.6 (direct 0.2) Albumin: 3.2 protein 5.7
U/A: yellow/clear spec gravity 1.011, pH 5.5, gluc neg, protein 30, moderate blood, 7 RBCs, 98 WBCs, no bacteria
Skin biopsy: leukocytoclastic vasculitis, immunofluorescence neg
Imaging: CXR: prominent vessels, no parenchymal changes
HIV - non-reactive, ANA neg, ANCA neg
RF +, C3 60 (L), C4 undetectable
SPEP - monoclonal IgG kappa peak, UPEP - monoclonal IgG kappa peak and Bence-Jones protein on immunofixation
HepC neg, HepB surface Ab neg, core +, surface Ag +
BM biopsy - immunophenotypic aberrant B cell population

Final Diagnosis: Cryoglobulinemia secondary to HepB

Problem Representation: Elderly gentleman w/ ischemic HF presents w/ erythematous, non-blanching macular rash on legs and trunk; labs significant for glomerulonephritis and monoclonal gammopathy.

Teaching Points (Sukriti):
Investigating the Sx: Rash
Characterising the morphology of the rash
Analysing the Sx associated w/ the rash and potential pitfalls:
Pruritus and tenderness suggest an **inflammatory pathology**, however
- Pruritus may be primary or secondary
- Tenderness may be a consequence of the LE edema

In the **context of HF**, the **most common** cause of rash are petechiae that develop by rupture of fragile capillaries secondary to elevated hydrostatic pressure

Collecting clues: Systemic inflammatory syndrome + non blanching rash + anemia + glomerulopathy
Context + Sx + Time: Elderly age concerning for malignancy masquerading as rash
Non- blanching rash - Purpuric and petechial rash
Violaceous rash - Lichen Planus (Hepatitis screening)
"Use protein on U/A as a binary screen" - Quantify using a 24hr urine protein/ spot Cr

Framing a hypothesis: Small vessel vasculitis involving skin + kidney:
Small vessel vasculitis involving skin + kidney: ANCA mediated, Anti-GBM, complement mediated, IgA, lupus associated, Cryo >> Behcet's
- Is there lung parenchymal involvement?
- Immune vs pauci-immune nephritis: low complement in former (IgA, Lupus, Cryo), normal in latter (ANCA) mediated vs ANCA neg

Low complement:
C3 << Post-strep, HIV, atypical HUS, C3 glomerulopathy, dense deposit disease
C4 << Hereditary angioedema
C3 and C4 << SLE, cryo, APLA, Sjogren, MPGN, cirrhosis/malnutrition
"RF can be the poor man's cryoglobulinemia"