10/01/21 Morning Report with @CPSolvers

***Case Presenter**: Ann Marie Kumfer (@AnnKumfer)* ***Case Discussants**: Rabih Geha (@rabihmgeha) and Reza Manesh (@DxRxEdu)*

CC: Fever, pharyngitis and body aches.

HPI: 35 year old female with 3 days of fever, headache (diffuse, bilateral). No photophobia or phonophobia. Was unable to eat for 2 days due to pain in her throat. Refers tremors and tenderness over her thyroid. Hyperdefecation with forced movements, w/o blood. Vaginal discharge, positive for BV.

1 month ago presented w/ tremors and TSH was low.
Outpatient clinic - mild neutropenia. Started vitamin supplementation.

PMH: Graves disease, stopped tx 8 months ago. Thyroid levels were stable. Covid neg several times. Fully vaccinated.

Meds: Tylenol. Prior methimazole (stopped 8 months ago)

Fam Hx: None

Soc Hx: Exposure to children.

Health-Related Behaviors: No oral sex. 1 sexual partner. Last menstrual cycle 1 week ago.

Allergies: None

Vitals: **T**: 39.3 -> 37.8 **HR**: 130 -> 94 **BP**: 120/70-80 **RR**: 18 **SpO_2**: 96
Exam: After fever resolved.
Gen: Appeared comfortable, no acute distress.
HEENT: Normal conjunctiva, ocular movements. LOTEP. No proptosis. Erythema and small exudates in the tonsils. No cervical lymphadenopathy. Normal movement of throat. No bruit over thyroid and a little tenderness.
CV: Tachycardia. Normal rhythm.
Pulm: Clear, symmetric breath movements.
Neuro: Fine tremor in the hands.
Extremities/Skin: No synovitis.

Notable Labs & Imaging:
Hematology:
WBC: 8.9 (ALC 1.3 ANC 7) *ANC 1 month prior was 600 Hgb: 13 Plt: 248

Chemistry:
Na: 135 K: 3.3 Cl: 101 CO2: 28 BUN: 8 Cr: 0.7 glucose: 95 Ca: nl
AST: Nl ALT: 67 Alk-P: Nl T. Bili: Nl Albumin: 3.7 TP 9.1
TSH <0.008, T3 total 1.4, T4 1.87 (upper limit of normal 1.76)
Urine pregnancy test and COVID test were neg.
UA: SG 1.03, mod leukocyte esterase, trace ketones. 10 RBCs, 23 WBCs w/ occasional bacteria. Culture grew mixed flora.
Serology: HIV neg. Respiratory panel was neg.
Was started on methimazole, propranolol and ceftriaxone. Next day symptoms improved.
Throat swab: +4 Streptococcus.

Final Dx: Thyroid storm triggered by strep pharyngitis.

Problem Representation: 35F with PMH of Graves Dz and neutropenia p/w fever, hyperdefecation and pharyngitis.

Teaching Points (Laura <3):
Pharyngitis:
- Causes: infections (group A strep, sexually transmitted infections), autoimmune, drug induced, malignancy
- Suppurative?
- Local complications?
- Without systemic features is the most common presentation.
- The presence of systemic symptoms lead to virus or group A strep infection.

Graves disease:
- Hyperthyroidism: autoimmune cause; 80% of the cases.
- Diagnose: symptoms + low TSH + high T3 + high T4
- Medication could cause bone marrow suppression
- Treatment: Radio oblation

Inflammation:
- Compensatory sympathomimetic response: it is never more than the insult itself.
- Sympathetic toxicity: presence of tremor and spontaneous hypokalemia.

Thyroid storm:
- Endocrine emergency! **Fever, organ damage.**
- Risk of quick cardiopulmonary decompensation.
- Management is supportive with cooling and fluids, alongside measures taken to reduce thyroid hormone synthesis, hormone release and inhibition of the peripheral effects of excessive thyroid hormone.