A Case of Double Iatrogenesis

By: Dr. Camilla Elven and Dr. Avital O’Glasser

Introduction:
The general approach to medicine involves finding a unifying diagnosis, based on patient signs, symptoms and risk factors. For example, infection risk must be considered in an immunosuppressed patient, and rare syndromes might be considered in patients with rheumatologic diseases. Here, we report on a patient with dermatomyositis with two simultaneous iatrogenic complications rather than the suspected single complication of the rare disorder.

Case Description:

HPI:
62yo male who presented one day after receiving an outpatient CT c/a/p to investigate for fever, Malignancy. Admitted for SIRS of unknown etiology.

HPI:
1. The left ventricular cavity size is normal.
2. The LV ejection fraction is normal.
3. Right ventricular size, thickness and function are normal.
4. There are no prior exams available for comparison.

CT c/a/p - no neoplastic process noted

CXR - Right sided CVC with tip placement as above. Clear lungs. (figure 1)

Imaging:

EKG:
Pansensitive Pseudomonase 2/2 (prior to antibiotics)

Cultures:
AFB negative, fungal negative

Labs:
TSH 1.96
U/A - unremarkable
Trop negative
LFTs - AST 29, ALT 33, Tbili 0.4, Alk phos 47, Albumin 2.5

Extr: trace pitting edema bilat, warm and well perfused.

Abd: soft, nondistended, NTTP

Pulm: CTAB

CV: tachycardic, RR, no m/r/g

Neck: Difficult to visualize JVP. + RIJ

HEENT: MMM. Very erythematous lower face.

Gen: obese, jovial older Caucasian gentleman, sitting up in bed in NAD. Nontoxic, nonicteric, nonhypertensive.

Physical Exam:

Family Hx:

Social Hx:

Meds:
Prednisone + IVIG, propranolol

PMHx:

Dermatomyositis, Basal cell carcinoma, essential tremor

Review the common complications of dermatomyositis.
Learn standard SVT workup and treatment.
Identify tachycardia induced by central line placement.

Learning Objectives:

Figure 1: CXR
Figure 2: EKG

Hospital Course:

Initially started on broad spectrum antibiotics - vancomycin + cefepime
Due to hypotension, a central line was placed and patient was initially transferred to the medical ICU.
Once stabilized, brieﬂy on the medicine floor, but promptly developed recurrent and refractory runs of SVT necessitating return to the ICU.
Due to possible deep line placement evident on CXR, the central line was removed (BP had also stabilized and not requiring pressors)
After line removal, his burden of SVT dramatically improved
Cardiologic consulted, planned on following up as an outpatient, restarted home BB (originally for his essential tremor) and possible EP study and catheter ablation
Blood cultures later turned positive for pseudomons.
Became agitated, arrhythmias, we considered a broad differential in the setting of dermatomyositis before central line placement, the burden of tachycardia was dramatically worsened after line placement and dramatically improved following line removal. Dermatomyositis patients, are known to sometimes have myocardial involvement and therefore have an association with arrhythmias. We suspect that he was predisposed to the arrhythmia, which was iatrogenically exacerbated. In conclusion, this case exemplified the importance of looking for zebras without forgetting the iatrogenic complications in medicine.

Discussion:

This case highlights the complexity of evaluating overlapping pathologies in an already complex patient at risk for rare disease and therapy-related complications, such as immunosuppression. Given the initial unclear trigger for severe sepsis with tachycardias, we considered a broad differential in the setting of dermatomyositis including rare, but not infrequently associated rheumatologic conditions. Pseudomonal bacteremia without a clear primary source, is rare, even in the setting of chronic steroid use.

As another interesting aspect to this case is the finding of SVT. While this was present before central line placement, the burden of tachycardia was dramatically worsened after line placement and dramatically improved following line removal. Dermatomyositis patients, are known to sometimes have myocardial involvement and therefore have an association with arrhythmias. We suspect that he was predisposed to the arrhythmia, which was iatrogenically exacerbated.

In conclusion, this case exemplified the importance of looking for zebras without forgetting the iatrogenic complications in medicine.

References:

Differential Diagnosis
1. Antinuclear syndrome - fever, ILD, arthritis, Raynaud phenomenon
   o The antibody is present in at least 25-40% of patients
   o Usually adults-children (1)
2. Cardiac
   o sinus tachycardia
   o diastolic dysfunction
   - myocarditis
   - cardiomyopathy
3. Cardiovascular
   - SVT
   - AF
   - Deep vein thrombosis
4. Malignancy
5. Seizures
6. Severe sepsis/DIC
7. SIRS
8. Sepsis
9. Tachycardia
10. Severe sepsis