

Venous Thromboembolism and Stroke as Presenting Findings in a Patient with Sarcoidosis

Jackie Urban, MD, Stephanie Lakritz, MD, Joseph Simonetti, MD, MPH

Learning Objectives:

- Recognize increasing evidence that systemic inflammatory disease causes hypercoagulability.
- Recognize neurosarcoidosis as a potential lymphoma mimic.

Patient Presentation:

A 48 year old male with a history of recurrent venous thromboembolism (VTE) treated with warfarin, and newly identified mediastinal mass presented with gait problems, altered mental status, and memory loss.

Physical Exam:

- Expressive aphasia, dysarthria
- Right sided facial, upper, and lower extremity weakness
- Normal cardiac Rhythm

Imaging/Pathology:

CT and MRI: Acute left thalamic stroke and small ependymal and leptomeningeal nodular foci of enhancement concerning for lymphoma.

CSF flow cytometry: Negative for malignancy.

PET scan: Increased uptake in paraesophageal lymph node (Fig. 1).

Excisional biopsy: Non-necrotizing granulomas consistent with sarcoidosis .

Figure 1. PET scan showing increased uptake in a paraesophageal lymph node.

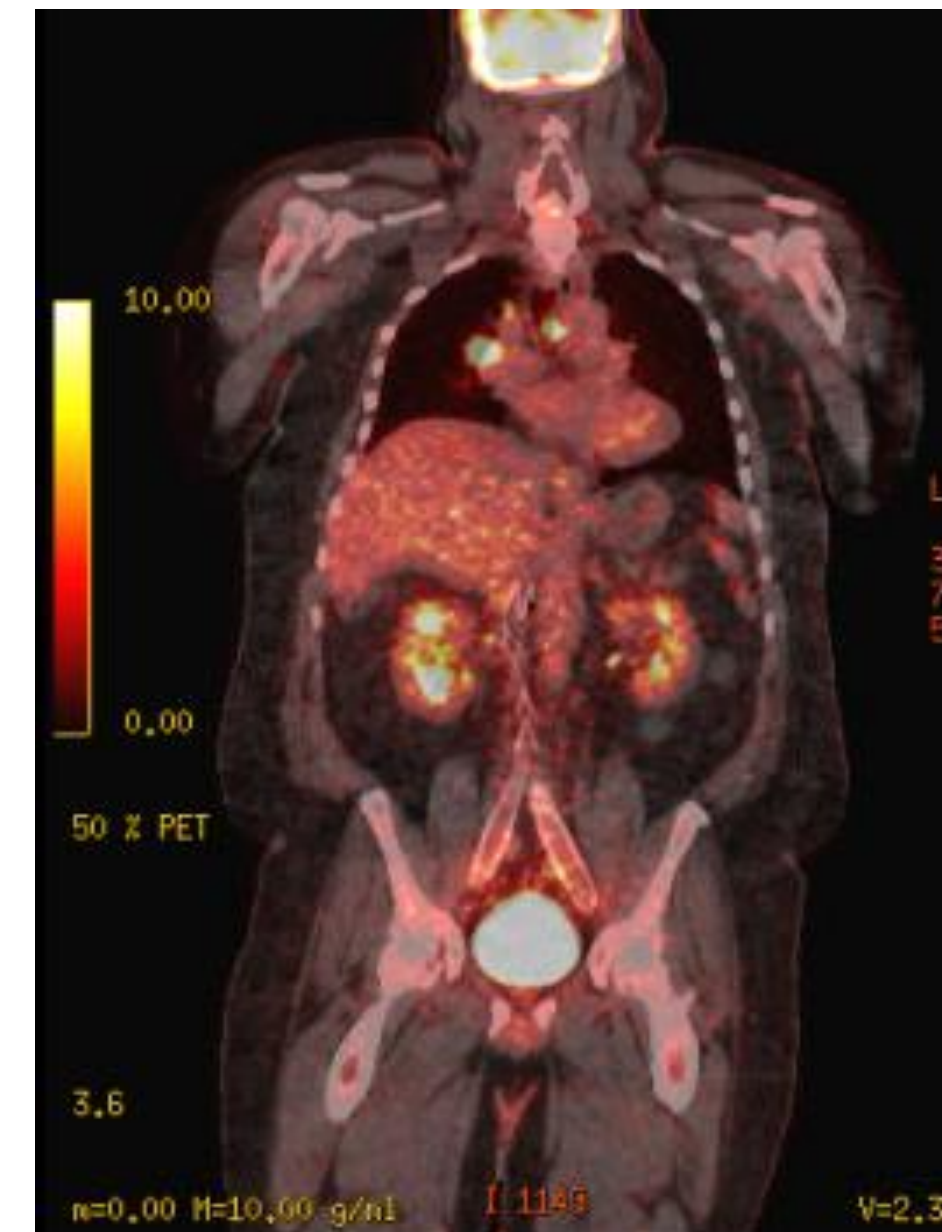
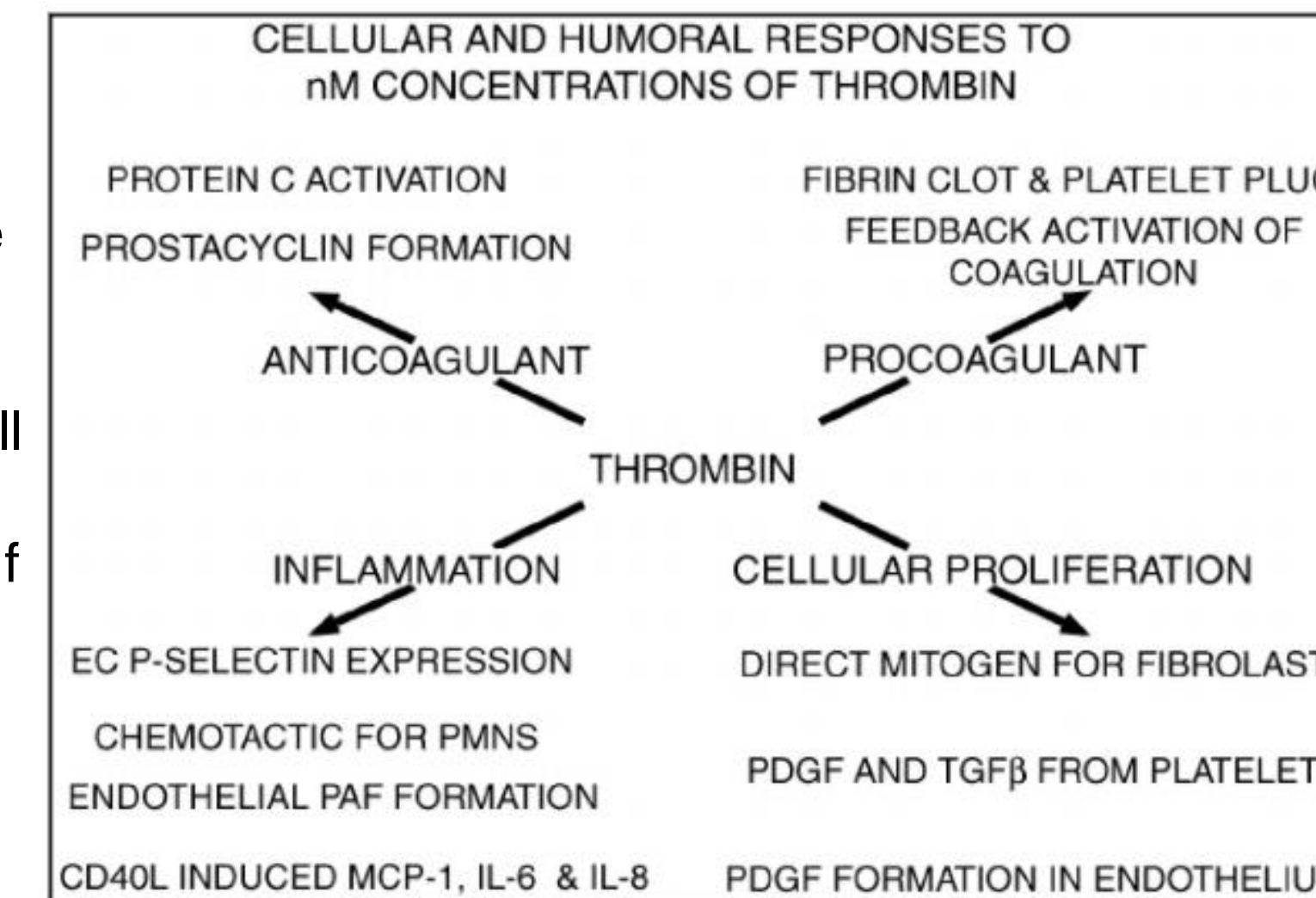


Figure 2. Thrombin generates a multifactorial response promoting both pro-coagulation, anticoagulation, as well as inflammatory and mitogenic responses. If these responses become off balance, hemostasis can be affected.



Esmon CT. Inflammation and thrombosis. *J Thromb Haemost.* 2003 Jul;1(7):1343-8. doi: 10.1046/j.1538-7836.2003.00261.x. PMID: 12871267.

Inflammatory Diseases as Risk Factors for VTE

- Rheumatoid Arthritis
- Psoriasis
- Vasculitis
- Systemic Lupus Erythematosus
- Inflammatory Bowel Disease

Mechanism of Action

The hypercoagulable state found in these diseases likely results from an imbalance of cytokines, leukocytes, and chemokines, which all play a well-defined role in both the formation and break down of VTE (Fig. 2).

Sarcoidosis as a Risk Factor for VTE

In a small meta-analysis that included three observational studies, the risk of VTE among those with sarcoidosis was 40% higher than in randomly selected patients from the databases.

Discussion

- A meta-analysis found that risk among patients with lupus, Sjogren's syndrome, inflammatory myositis, or systemic sclerosis was more than three times higher than the general population.
- A cohort study of patients with psoriasis, rheumatoid or psoriatic arthritis found that VTE risk was 10-40% higher compared to matched populations
- Interestingly, among patients with psoriasis or psoriatic arthritis, those treated with disease modifying agents did not have elevated risk.

Take Home Points

- Neurosarcoidosis is potential lymphoma mimic.
- Inflammatory diseases, such as sarcoidosis, should be considered when evaluating a patient with hypercoagulability.
- Further research is needed to determine whether treatment of underlying diseases lowers VTE risk and provide guidance on when prophylactic anticoagulation is beneficial.

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