COVID-19 Awake-Proning: A Hematoma Saga

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LEARNING OBJECTIVES
- Appreciate that awake-proning may be of major benefit in COVID-19 patients with ARDS
- Be aware that caution should be exercised with prolonged proning in the setting of therapeutic anticoagulation.

CASE PRESENTATION
A 70-year-old man presented to the ED with dry cough, shortness of breath, and fever and was admitted to the ICU with acute hypoxic respiratory failure secondary to COVID-19.

HPI:
- Patient on day 14 of awake-proning protocol on Hi-Flow nasal cannula
- Medical therapy included remdesivir for 5 days, tocilizumab, dexamethasone 6mg daily for 10 days and convalescent plasma
- Enoxaparen 40mg subcutaneously daily for 11 days which was increased to 80mg BID starting on day 12 given his D-Dimer of >6000 (concern for small vessel pulmonary thrombosis related to COVID-19)
- New onset localized right sided chest pain rated 6/10 on pain scale with some swelling in the area.

PMH: Hypertension, BPH, and diet-controlled type 2 diabetes
SH: No alcohol, smoking, or illicit drug use

Physical Examination:
- Chest: soft tissue swelling approximately 2cm in diameter on right upper chest, non-erythematous. Tender to palpation.
- Heart: RRR, normal S1 and S2, no murmur or gallop.
- Lungs: Air movement good bilaterally, crackles on both lung fields. On high flow NC. No increased work of breathing.

Laboratory Data:
- PT: 13.3
- INR: 1.14
- PTT: 49.2
- INR after 14 days of tocilizumab and dexamethasone:
  - Increased risk for abscess
  - Decreased reliability of WBC count and fever trend
  - Desire to limit procedures and exposure of additional health care workers

Imaging:
- CT Thorax with Contrast (Figures a-d)

Figures a,b: Initial CT scan. Heterogeneously enhancing, well defined lesion identified occupying the right pectoralis and retropectoral space, measuring 5.6 x 8.8 cm in size. Non-enhancing area seen within suggestive of necrosis with fluid level. Figures c,d: Repeat CT 1 month later. Right pectoral anterior chest wall hyperattenuating hematoma, now measuring 3.9 x 8.8 x 12.8 cm

HOSPITAL COURSE
- Enoxaparen was held
- Conservative management with compression, ice, and hemoglobin monitoring
- Hemoglobin remained stable, and the patient was started on subcutaneous heparin on day 27 for DVT prophylaxis given a normalized D-Dimer.
- Discharged home after 70 days

DISCUSSION
- Proning has become a mainstay of treatment protocol for ARDS and acute hypoxic respiratory failure secondary to COVID-19 in order to avoid the complications associated with mechanical ventilation.
- Harms associated with maintaining this position for prolonged periods include discomfort, anxiety and pressure ulcers
- Complications such as hematoma, as in our patient, might have serious implications if intubation and embolization are required in the case of active extravasation

CONCLUSION
- Awake-proning may be of major benefit in COVID-19 patients with ARDS
- Caution should be exercised with prolonged proning in the setting of therapeutic anticoagulation.

MASS IN A COVID-19 PATIENT
- Significance of course of tocilizumab and dexamethasone:
  - Decreased respiratory effort given pressure and discomfort
  - Risk/benefit of holding anticoagulation