Chronic DIC as a Harbinger of Cancer

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INTRODUCTION

Disseminated Intravascular Coagulation (DIC) is a systemic coagulation disorder characterized by :

- Abnormal activation of the clotting system resulting in fibrin microthrombi and increased tendency to bleed secondary to consumptive coagulopathy
- Presence of DIC mandates search for an underlying etiology- usually infectious, inflammatory or malignant.
- In this case report, we describe a patient with chronic DIC, with evidence of coagulopathy one year prior, as the presentation of prostate cancer

CASE DESCRIPTION

- 76-year-old male presented to the ED with right sided neck pain of 2 weeks duration
- **PMH** : Atrial Fibrillation, Chronic venous stasis of lower extremities, **urinary retention** requiring use of an indwelling Foley catheter
- **Home meds** : Aspirin (occasional) for neck pain
- **Social Hx** : Never smoker, daily consumer of moderate amount of alcohol. **Vitals** : afebrile, 71 bpm, 132/90 mmHg, 99 % on RA

References :

1. Prostate cancer: beware of disseminated intravascular coagulation. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4386315/
2. Disseminated Intravascular Coagulation as the Presenting Sign of Metastatic Prostate Cancer. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1831660/

Figure 1

	Admission	1 year prior
PT	> 90.0	12.6
INR	> 9.9	1.3
aPTT	56	32
Fibrinogen	< 70	
Hgb	14.6	
Plt count	275	
WBC count	16.1	
ALP	225	

CASE DESCRIPTION (contd.)

- Small amount of **active bleeding** on the tongue
- **Neck**: no spinal / para spinal tenderness, no restriction in aROM / pROM
- **Cardiorespiratory exam** : systolic ejection murmur in the aortic region
- **Extremities** : **blanchable purplish – red discoloration** of the hands (Figure 1)

HOSPITAL COURSE

Vitamin K 10 mg IV	• PT – 16.6, aPTT - 42 • Fibrinogen – 90
Urinary retention + elevated ALP ?	• PSA – 172 • **Malignancy ?**
CT-abdomen / pelvis	• Lytic and sclerotic osseous lesions concerning for metastasis

- Suspicion raised for metastatic prostate cancer induced coagulopathy, likely chronic DIC

- CT of the C-spine: : irregular sclerotic changes, concerning for malignancy
- Elevated D-dimer + fibrin degradation products + presence of schistocytes -> chronic DIC. Venous duplex of extremities -> chronic bilateral deep and superficial vein thrombosis
- Bicalutamide initiated -> normalization of coagulation abnormalities. US-guided prostate biopsy -> prostate adenocarcinoma -> follow up with urology and oncology.

DISCUSSION

- DIC can broadly present in two ways : chronic/ low grade : characterized by alteration in lab values with minimal or no symptoms ; and acute/ non-compensated : characterized by severe clinical manifestations
- With an incidence ranging from 13-30%, DIC is the most common coagulopathy in prostate cancer
- Among those, only 0.4-1.65% of patients have clinical signs and symptoms of DIC, requiring high index of suspicion in recognizing and managing this potentially fatal complication.

CONCLUSION

- Acute DIC associated with prostate cancer has been well reported in literature.
- Through this case, we would like to highlight the importance of considering chronic DIC and an underlying malignancy in patients having coagulation profile abnormalities in the absence of significant signs and symptoms.
- Treatment involves treating the coagulopathy with blood products, and a possible role of heparinization in situations where thrombosis dominates.
- Mainstay of treatment of underlying prostate cancer is complete androgen blockade / deprivation.