Ischemic Priapism: A complication of severe COVID-19 infection
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Introduction
• Covid-19 infection is associated with systemic inflammation involving widespread manifestations.
• Priapism in Covid-19 is rare and with unclear pathophysiological association involving prothrombotic inflammatory state and venous thromboembolism.
• We report a case of low-flow priapism with no response to multiple corporal aspirations.

Case Presentation

Chief complaint: Progressive shortness of breath (SOB)
HPI: A 41-year male with prior history of hypogonadism and unvaccinated for COVID presented with shortness of breath 11-days after diagnosis of COVID-19 infection.

Vitals: BP: 110/50 mmHg, HR: 120 bpm, pH: 7.38, pCO2: 110

Within 1/2 hour of admission
• Patient complained of painful erection which was ongoing for last 5 hours.
• Patient was evaluated immediately by Urology team and on examination:
  - Penis shaft: firm, erect shaft which was tender.
  - Glans penis: cold to touch and tender.
• Aspiration of Corporal blood: pH-6.82, pO2-40, pCO2-110.

Within 8 hours of admission
• Patient suffered PEA cardiac arrest and unfortunately could not be revived.

Hospitalization Course events
8 hours after admission
• Patient complained of painful erection which was ongoing for last 5 hours.
• Patient was evaluated immediately by Urology team and on examination:
  - Penis shaft: firm, erect shaft which was tender.
  - Glans penis: cold to touch and tender.
• Aspiration of Corporal blood: pH-6.82, pO2-40, pCO2-110.

4 hours after the procedure
• Priapism re-occurred and aspiration procedure was repeated.

4 hours after the procedure
• With third time recurrence- Al-ghorab shunt was planned.
  - Meanwhile, patient was intubated for worsening hypoxia and mental status. CTA-chest could not be done as patient suddenly deteriorated.

About 24hours after admission
• Patient suffered PEA cardiac arrest and unfortunately could not be revived.

Imaging:
CXR: Diffuse interstitial and alveolar airspace disease in this COVID positive patient is consistent with COVID pneumonia.

CTA-chest could not be done as patient suddenly deteriorated.

Infection:
• COVID presented with shortness of breath 11-days after diagnosis of COVID-19.
• Positive patient is consistent with COVID pneumonia.
• Infection.

Laboratory Values (Reference range)
- Hemoglobin: 13.9 (13.5-17.5 g/dl)
- White cell count: 11.5 (8.8-10.4 x 10^9/L)
- Neutrophil: 86% (40-60%)
- Lymphocyte count: 9.0% (20-40%)
- Procalcitonin: 1.39 ng/ml (n<0.1 ng/ml)
- C-reactive protein: 30.9 mg/L (n<10 mg/L)

Vitals
- BP: 141/63 mmHg
- HR: 102 bpm
- RR: 32/min
- SpO2: 47%
- Temp: 37.1 C

Venous Blood gas
- pH: 7.38
- pO2: 27
- pCO2: 38

Corporal Blood gas
- pH: 6.82
- pO2: 40
- pCO2: 110

Discussion
- Rapidly deteriorating Covid-19 patients with high oxygen demands requiring Intensive care are prone to complications like ischemic priapism.
- High clinical suspicion is necessary as its an emergent condition and timely treatment can prevent permanent damage and infertility.
- Most cases were reported to have high inflammatory serum markers pointing towards prothrombotic state and reduced venous flow as the likely mechanism, however further studies are needed to establish pathophysiological mechanism.

References