A CASE OF POST-ACUTE COVID AUTONOMIC DYSFUNCTION

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Introduction

We present a case of orthostatic hypotension persisting two months after resolution of acute COVID-19 infection.

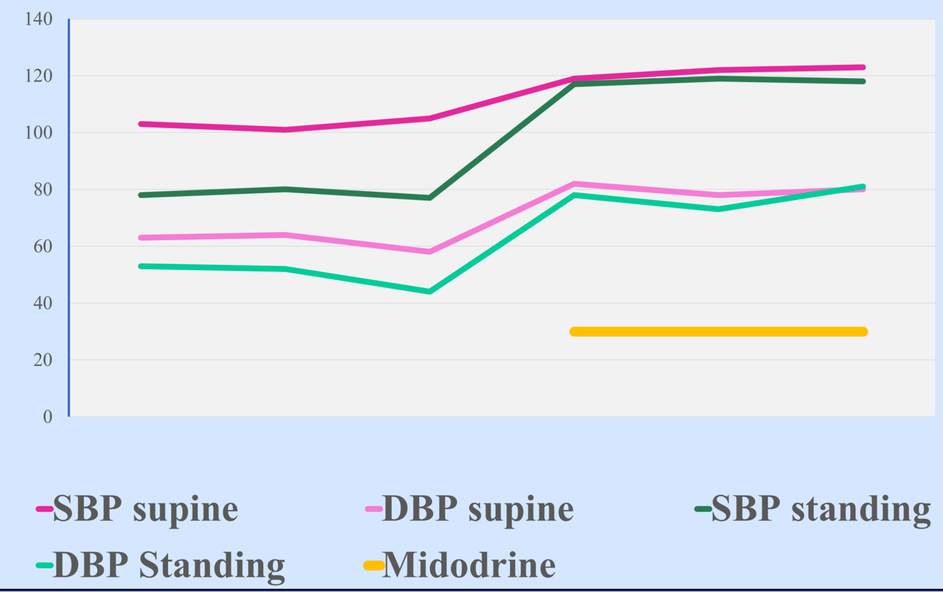
Case Presentation

•65-year-old man was admitted with hypoxic respiratory failure secondary to COVID-19 pneumonia. He was treated with Remdesivir, Tocilizumab and IV dexamethasone resulting in improvement in his respiratory failure. Near discharge, he was noted to have orthostatic hypotension during physical therapy.

•Morning cortisol and glucose levels were normal. He received IV fluids & hydrochlorothiazide, metoprolol, irbesartan and Lasix were held.

•His hypotension partially improved, and he was discharged to inpatient rehab. There he continued to have persistent orthostatic hypotension with complaints of dizziness and lightheadedness with mild physical activity.

Trend of Blood Pressure Before & After initiation of Midodrine



Case Presentation

- His supine BP was 105/64 with heart rate of 83 while standing BP was noted to be 73/44 with heart rate of 103. His telemetry did not reveal any arrhythmias.
- His symptoms and orthostatic vitals improved after initiation of midodrine 5 mg 3 times daily and he was discharged on it.
- Our patient continued orthostatic hypotension over the course of 2 months after resolution of acute COVID-19 infection was deemed secondary to autonomic dysfunction related to infection.

Discussion

- Potential pathophysiological mechanisms include Immune or virus mediated nerve damage, destruction of ACE-receptors by SARS-COV2 virus, increased cardiac sympathetic nervous system outflow caused by SARS-COV-2 viral invasion in brainstem & extracardiac postganglionic SNS neurons, exacerbated by deconditioning and volume
- Management includes:
  - ➢ Non-pharmacologic- compression stockings, avoidance of rapid changes in posture, graded exercise therapy
  - ➢ Pharmacologic management including fluid and salt replacement, fludrocortisone and midodrine.

Conclusion

COVID-19 related dysautonomia could be a potential culprit behind persistent fatigue, orthostatic intolerance, near syncope and syncope experienced by long COVID patients.

References

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