



Obesity Hypoventilation Syndrome Diagnosed and Treated In a Patient with Full Functional Recovery Following Intubation for Severe COVID-19 Pneumonia

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CASE PRESENTATION

A 43 year-old male, with no significant past medical history presented to the emergency department having being found lethargic at home. He had fever (102.9), hypotension (87/51) and severe hypoxia room air O₂ saturation of 69% increasing to 86% on 15L non-rebreather mask.

Due to increased work of breathing and persistent hypoxia patient was intubated and transferred to the medical intensive care unit. Initial labs were significant for PCO₂ 62.5. Chest X-ray revealed bilateral infiltrates and elevated Il-6 was consistent with COVID-19 infection. He was extubated to 10L oxygen via nasal cannula on hospital day 10. On hospital day 12 the patient was transferred to our acute inpatient rehabilitation unit repurposed as a medical unit.

DISCUSSION

On physical exam, her strength was ~2/5 throughout on manual muscle testing. Oxygen requirements remained high and he was noted to desaturate to 60-70% while sleeping despite supplementary oxygen. The patient's body mass index was 45.

He was diagnosed with obesity hypoventilation syndrome (OHS) based on laboratory and clinical findings and started on bilevel non-invasive positive pressure ventilation BPAP with resolution of night time hypoxia (oxygen saturation 99%, normalization of venous blood gas).

Daytime oxygen requirements continued to decline and the patient recovered functionality with an intensive physical therapy regimen.

On hospital day 35 the patient was discharged home with normal oxygen saturation on room air during the day, BPAP at night, ambulating two hundred feet independently without a gait aid.

CONCLUSIONS

Treatment of sleep apnea during the COVID-19 pandemic is a challenge, but our case shows that OHS can be diagnosed and treated with an outstanding outcome even in patients with severe COVID-19 disease.

It also shows the benefit of intensive rehabilitation for patients with deconditioning after COVID-19 infection.

BIBLIOGRAPHY

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