

Management of COVID-induced Acute Respiratory Failure Requiring Intubation with Osteopathic Manipulative Medicine

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Introduction: New York City saw the first severe COVID-19 outbreak in the United States starting in March 2020. At that time, few reliable treatments for management of severely ill COVID-19 afflicted patients were known. Residents specializing in Osteopathic Neuromusculoskeletal Medicine (ONMM) at St Barnabas Hospital in the Bronx worked on the frontlines and cared for a number of patients admitted with COVID-19 related pneumonia and Acute Respiratory Failure (ARF) requiring intubation.

Case: A 67 year old male with medical history of hypertension and diabetes mellitus was admitted with respiratory failure due to COVID-19 and intubated one week later due to ARF. The ONMM department was consulted on hospital day 2, and he received osteopathic manipulative treatment (OMT) 5 days per week throughout his hospitalization.

- OSE Initial: SBS compression, extended; R lower ribs inhaled, severe mediastinal fascial strain, prevertebral fascial strain, T4 FRSr
- OSE post-intubation: SBS compression, flexed; severe prevertebral fascial strain, T1-2 FRSr; R lower ribs exhaled, decreased rib compliance

Results: Patient was extubated thirteen days after intubation and subsequently discharged.

- OSE post-extubation: R condyle anterior, moderate SBS compression, extended; moderate mediastinal fascial strain, moderate prevertebral fascial strain, R ribs exhaled, L upper ribs exhaled, decreased rib compliance

Discussion:

COVID pneumonia is a devastating disease with a very high death rate. Once intubated, the death rate exceeds 80%. This case illustrates an intubated COVID patient treated with OMT who was extubated and ultimately discharged home, suggesting the safety of OMM as a management method in such patients. As new research expands our understanding of COVID's pathophysiology, we may also be able to understand how OMM can provide additional therapeutic benefit.