Mr. C
Presentation

- 33 year old man with PMHx significant for HIV (CD4 > 400) who was brought in from HIV clinic for worsening dyspnea
- Recently seen at an urgent care, RPNA with human metapneumovirus and so he was sent home and Covid-19 testing not pursued
In the ER, he had SpO2 88% on room air and was admitted for hypoxemic respiratory failure

Initial nasopharyngeal Covid-19 PCR negative
WBC 3.2
- 72% Segs, 6% bands, 11% lymphs and 11% monos

Hgb 14.2

Repeat RPNA negative

AST 268
ALT 153
Alk Phos 107
Tbili 0.80

Na 130
K 4.2
Cl 90
Bicarb 24
AG 16
BUN 12
Cr 0.79
Labs

- **WBC 3.2**
  - 72% Segs, 6% bands, 11% lymphs, and 11% monos
- **Hgb 14.2**
- **Repeat RPNA negative**

- **AST 268**
- **ALT 153**
- **Alk Phos 107**
- **Tbili 0.80**

- **Na 130**
- **K 4.2**
- **Cl 90**
- **Bicarb 24**
- **AG 16**
- **BUN 12**
- **Cr 0.79**
Oxygen supplementation:

- First 4 days he required 3-5L NC to maintain SpO2 > 94%
- First ABG is hospital day 4
- On 7L NC: pH 7.47, CO2 32, O2 54
- He was placed on 15L non-rebreather but continued to have desaturations and increased work of breathing
- Intubated for hypoxemic respiratory failure
Vent adjustments

- On the night of intubation, his SpO2 was noted to be 90-92% and ABG showed pH 7.38, CO2 45 and O2 59
- Prior settings:
  - VTPC
  - Tv 410 (5.8 ml/Kg ideal body weight)
  - RR 18
  - PEEP 10
  - FiO2 60%
High sedation requirements

During his entire ICU stay, Mr. C required very high doses of sedatives, up to 4-5 maxed out medications at a time.
Difficulty liberating from the ventilator

- 15 days after intubation, he was extubated following successful spontaneous breathing trial (SBT)
- That night: increased work of breathing, concern for seizure with status epilepticus and so reintubated for airway protection
- 2 days later, extubated again following a successful 2 hour SBT
- Reintubated within 4 hours for work of breathing and tachycardia (3rd intubation)
Tracheostomy?

- Tracheostomy had been discussed over the past week given many factors:
  - high sedation requirement (assumed discomfort from ETT)
  - prolonged intubation (almost 3 weeks)
  - multiple reintubations despite successful SBT’s

Trach or try again?
Things to consider:

1) PPE
2) Location
3) Time of aerosolization
4) Experience of team

Surgical Considerations for Tracheostomy During the COVID-19 Pandemic
Lessons Learned From the Severe Acute Respiratory Syndrome Outbreak
Our approach:

1) PPE: N95 with contact and droplet precautions; negative pressure room and careful donning and doffing!

2) Location: bedside is preferred if space and resources are available

3) Aerosolization: paralytics administered and ventilation stopped when trachea is accessed

4) Team: experienced attending who had worked with the same RT/RN on many cases
Weaning sedation after the tracheostomy

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<th>Vasoactive Meds</th>
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<td>FiO2 (%)</td>
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Post Tracheostomy

Mr. C was weaned from vent to trach collar 2 days after his tracheostomy. Remained inpatient 10 more days before being discharged to LTAC for rehabilitation.

Hi Will,

I actually was discharged on Monday the 4th and have been recovering pretty quickly at home. I've been tracking my heart rate on my Apple Watch and have been seeing an improvement towards normal BPM. It's really good to be home. :)