



## Achalasia and Covid-19

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### Introduction

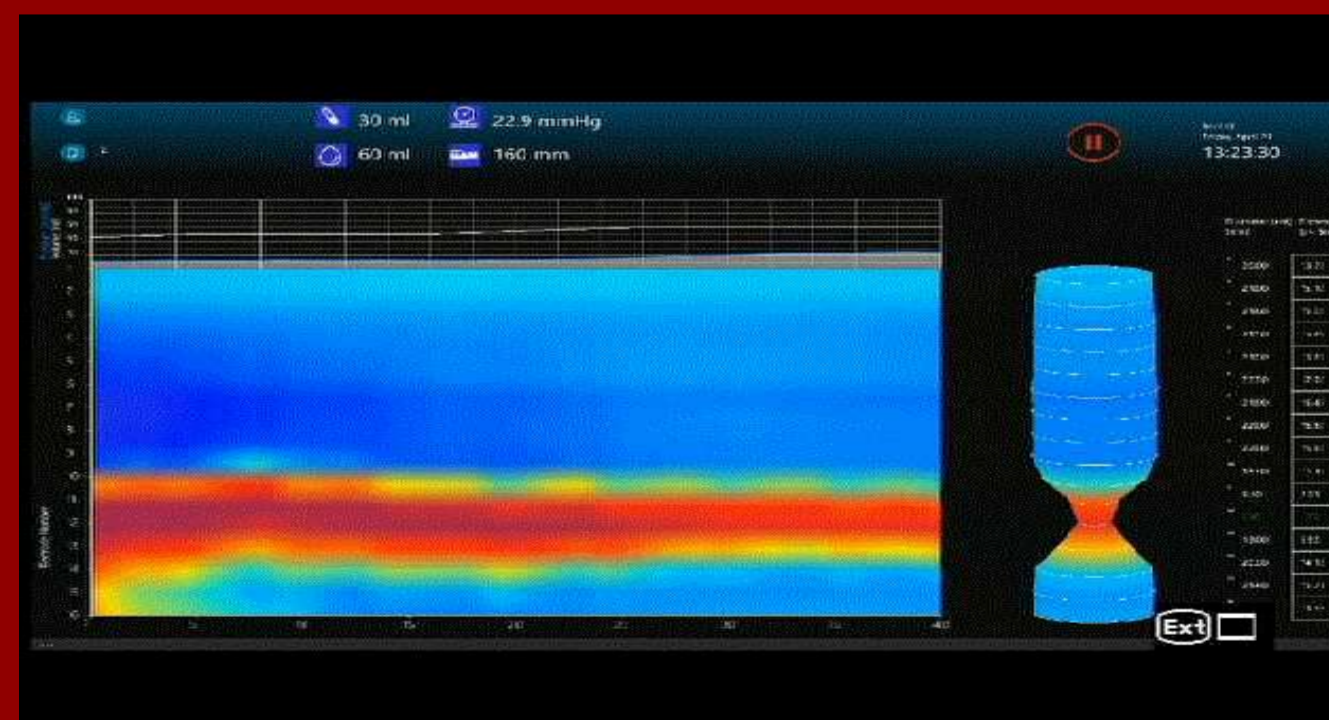
Achalasia is an upper GI disorder with an annual incidence of 1.6 cases per 100,000 individuals. The pathogenesis of achalasia is characterized by loss of myenteric neurons in the distal esophagus and lower esophageal sphincter. Achalasia is usually diagnosed with the aid of manometry, barium esophageogram. COVID-19 is a multisystem viral disorder and it causes a multitude of GI disorders including diarrhea, nausea, anorexia, vomiting, abdominal pain, GI bleeding and hepatic involvement. The objective of this case report is to show the rare association of new onset achalasia secondary to post-COVID syndrome.

### Case Report

A 63 year old man was referred for further evaluation of dysphagia that started a few months after a non-severe COVID infection with associated ageusia. He reported progressive dysphagia to both solids and liquids with concomitant regurgitation and chest pain. By the time he presented, he had lost 45 lbs over the course of 6 months and had an Eckardt score of 8. High resolution manometry was suggestive of evolving type II achalasia.

### Case Report-Cont'd

A follow up Endoflip exam with a 16 cm catheter inflated to 60 cc revealed a esophagogastric diameter of 7.3 mm and a distensibility index (DI) of 1.9. Timed barium esophagogram showed a 5 cm contrast column in distal esophagus at 5 minutes. The patient has since been referred for per oral endoscopic myotomy.



### Discussion

Sars-Cov-2 enters the GI epithelial cells through ACE2 receptors and exerts its effects through an aberrant immune response involving T- lymphocytes rather than direct epithelial damage. An anomalous immune reaction resulting in degeneration of inhibitory neurons in the myenteric plexus may be the cause of achalasia in COVID-19.

### Discussion-Cont'd

A Venezuelan study noted that the frequency of patients with achalasia during the year 2020 and 2021 was far greater than those of previous years and at least 2/3rd of these patients had presented with COVID-19 infection.

### Conclusions

Sars-Cov-2 is a single stranded RNA virus that enters the host cells through ACE inhibitors receptors. Sars-Cov-2 enters the GI system through the same receptors and cause multiple gastrointestinal manifestations like ageusia, nausea, vomiting, abdominal pain, diarrhea and lower gastrointestinal bleeding. It will be interesting to note if coronavirus can be isolated from muscle biopsies of these subjects as has been the case with VZV previously. Further investigation especially into patients presenting with GI symptoms with COVID infection is warranted.

### REFERENCES

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