

ATS 2026 Highlights

Respiratory Structure and Function Early Career Professionals



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Get to know members of the RSF Assembly

Is your research clinical, basic science or translational?

Clinical research.

Tell us about your research?

I have two different presentations. One is about a case that highlights a novel presentation of a latent autoimmune diabetes triggered by a recent COVID infection. Although rare, COVID has been shown to lead to autoimmunity via upregulation of the ACE messenger, which can induce damage and acute dysfunction of beta cells leading to new onset diabetes. The second case presentation highlights the rare demonstration of coagulopathic abnormalities, including elevated INR with a significantly elevated PTT level from cefazolin, and its resolution after discontinuation of the offending agent in addition to administration of FFP/vitamin K.

Where do you see yourself in 5 years?

Continuing to provide effective care as a clinician with a focus on the critically ill population. I love investigating and managing complex situations and being able to provide effective care for those in most need. I also plan to continue to pursue research that explore novel associations and approaches to improve patient outcomes.

What do you find is the major benefit of RSF Assembly Membership?

The RSF Assembly allows for fantastic collaboration and engagement with a great community.

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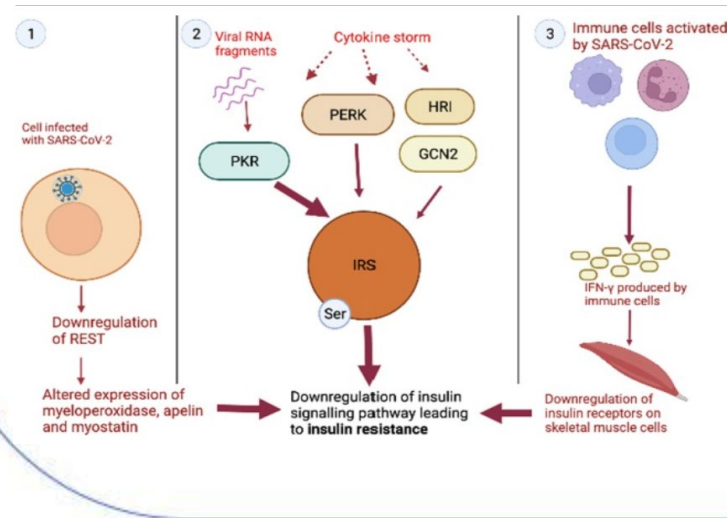
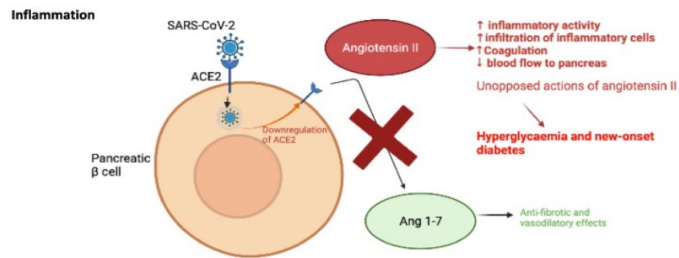
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A Novel Presentation of Latent Autoimmune Diabetes from COVID-19

Objective: As of 2020, COVID has affected 4 million people worldwide and caused 200,000 deaths. COVID infection has become a pandemic. According to WHO, the mean age was 46.7 years with 51.8% being male and a mortality rate of 5.6%. Although rare, COVID has been shown to lead to autoimmunity via upregulation of the ACE messenger, which can induce damage and acute dysfunction of beta cells leading to new onset diabetes. COVID has also been shown to upregulate PKR via viral RNA and cytokine storm which is a second mechanism that can lead to a viral induced new onset diabetes. This case highlights a novel presentation of a latent autoimmune diabetes triggered by a recent COVID infection.

Methods: A 65 year old male with a past medical history of primary hyperparathyroidism s/p right inferior parathyroidectomy 2022, ulcerative proctitis, appendiceal neoplasm s/p right hemicolectomy 2017 had presented to the hospital for abdominal pain. He was discovered to have SMA thrombosis which was managed by heparin. Upon further investigation during this hospital course the patient had a HgA1C of 12%. GAD at that hospitalization was elevated at .14 and blood glucose was elevated at 201, leading the diagnosis to be a new onset autoimmune diabetes. With the relative time of new onset diabetes the suspected trigger was a recent COVID-19 infection that the patient had prior to the development of this autoimmune condition. During this hospitalization, the patient was provided insulin and instructed on dietary modifications for better glycemic control for this new onset diabetes mellitus.

Results: LADA is a type of diabetes that is characterized by the gradual autoimmune destruction of the beta islets in the pancreas. One mechanism of how COVID instigates diabetes is its increased expression of ACE2 messenger ribonucleic acid (mRNA). The expression of ACE2 mRNA in the pancreas has been shown to induce damage and acute dysfunction of beta cells, which leads to diabetes in healthy individuals or exacerbation of an already existing diabetes with the developing of ketoacidosis. COVID has also been shown to increase insulin resistance through activation of PKR through viral RNA and cytokine storm leading to diabetes. Despite a multifactorial cause of LADA from COVID-19, the prevalence diabetes from COVID-19 is rare. This case highlights a novel presentation of diabetes from a recent COVID-19 infection.

Conclusion: With the recent pandemic, COVID-19 has affected millions of people worldwide and there have been new mechanisms with how this viral infection can lead to a new autoimmune condition. With ACE2 and PKR activation, COVID-19 can lead to a new onset diabetes in an adult with no prior history of insulin resistance or deficiency. Vigilance and awareness of this relationship can help a provider recognize this novel presentation to help achieve better outcomes of glycemic control in a latent autoimmune diabetic patient.