

have better thermogenic capability. This can serve as a target for further investigation for therapeutic intervention in obesity.

EP_B003

CENTRAL DIABETES INSIPIDUS WITH COVID-19 PNEUMONIA: A CASE REPORT

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INTRODUCTION

Although COVID-19 is well-known for its respiratory manifestations, extrapulmonary presentations such as cardiac arrhythmias, acute coronary syndrome, thrombosis, neurologic and ocular illnesses have also been reported. The mechanism of extrapulmonary complications of COVID-19 involves both the direct effects of SARS-CoV-2 via ACE2 receptors and indirect mechanisms associated with dysregulated host immune response. Apart from the respiratory system, ACE2 receptors are widely expressed in the cardiovascular, gastrointestinal, urogenital and nervous systems, which explains the multisystemic effects seen in COVID-19.

CASE

We present a case of COVID-19 pneumonia complicated by central diabetes insipidus.

A 64-year-old female with hypertension, diabetes mellitus and atrial fibrillation presented with fever and vomiting for two days. She was lethargic, with stable vitals and slight tenderness at the right upper quadrant of abdomen. She was initially treated with antibiotics in the emergency unit for ascending cholangitis. Contrast-enhanced abdominal CT showed cholelithiasis with no intraabdominal collections. COVID-19 GeneXpert tested positive. Chest radiography showed right lower zone opacities. On the ninth day of admission, she had polyuria (6000 mL in 24 hours). Test results showed serum Na 141 mmol/L, serum osmolarity 300 mOsm/kg, urine osmolarity 89 mOsm/kg and urine Na 15 mmol/L, suggestive of diabetes insipidus. She responded well to subcutaneous desmopressin, which reduced urine output to 15 to 30 mL/hour and improved results of her paired samples. While pituitary tests were normal, MRI revealed absence of T1 hyperintensity in the posterior pituitary, supporting the diagnosis of central DI. She required regular desmopressin doses for up to 3 weeks. Her polyuria resolved in her subsequent admission 4 months later for heart failure.

CONCLUSION

This case highlights self-limited diabetes insipidus as one of the extrapulmonary manifestations of COVID-19.

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IMPACT OF COVID-19 ON THE INCIDENCE OF NEWLY DIAGNOSED TYPE 1 DIABETES MELLITUS: A SINGLE-CENTRE EXPERIENCE

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INTRODUCTION

Recent studies suggest the increasing occurrence of newly diagnosed type 1 diabetes mellitus during the COVID-19 pandemic. It is postulated that the COVID-19 virus triggers a cascade of autoimmune reactions leading to the development of antibodies against beta cells of the pancreas. This study investigates the incidence of newly diagnosed T1DM in a Malaysian tertiary centre during the COVID-19 era in comparison to the same duration prior to it.

METHODOLOGY

This is a single-centre retrospective cross-sectional study among newly diagnosed T1DM patients. Patients aged between one year to less than 18 years old, who were referred to the Paediatric Endocrine Unit of the University Malaya Medical Centre from September 2017 to August 2022 were included in this study. Data including age, gender, anthropometric measurements, diabetic ketoacidosis occurrence, biochemical results and COVID-19 status for the past three months were obtained.

RESULTS

Fifty-seven patients who fulfilled the criteria of T1DM were included. Thirty-two patients (56%) were diagnosed during the COVID-19 era. Forty-four patients (77%) presented with DKA. There is no difference in the incidence of DKA and the severity status between these two periods, (77% versus 76.7%, $p=0.902$; and 51.9% versus 53.3%, $p=0.546$, respectively. Although not statistically significant, more patients needed pediatric ICU admission (13 versus 9), with lower pH at presentation during the COVID-19 era (7.05 versus 7.12). More than a third (37.5%) needed intubation ($p=0.019$). Recovery was also longer (48 hours versus 36 hours).