

SARS-COV-2-vaccine-inactivated-Sinovac-Biotech**S****Fulminant type 1 diabetes mellitus: case report**

A 50-year-old man developed fulminant type 1 diabetes mellitus (FT1DM) following administration of SARS-COV-2-vaccine-inactivated-Sinovac-Biotech for COVID-19 vaccination.

The man presented to a local hospital after experiencing abrupt onset of polydipsia and polyuria for one day. Before 6 days, he received first dose of SARS-COV-2-vaccine-inactivated-Sinovac-Biotech [CoronaVac; *route and dosage not stated*] for COVID-19 vaccination and developed a fever over 38.5°C for 5 days after vaccination. At presentation, laboratory findings revealed hyperglycaemia, ketosis and metabolic acidosis. He was diagnosed with diabetes and diabetic ketoacidosis (DKA).

The man was treated with fluid resuscitation and insulin administration, which resulted in prompt resolution of DKA. He was placed on an insulin regimen for glycaemic control. Routine laboratory test at two weeks after initial presentation, slightly elevated pancreatic enzymes, elevated HbA1c and slightly increased glycated serum protein. Flow cytometry revealed the frequency of CD8+ central memory cells (CD57CD45RA) was high. The susceptibility human leukocyte antigen (HLA) alleles for FT1DM (DQB1*02:03/03:03 and DRB1*09:01/09:01) resulted positive. Based on overall findings, a diagnosis of FT1DM was made. He still had an almost complete loss of islet function at 4 weeks after disease onset, which was confirmed by low levels of C-peptide during a mixed meal test (fasting C-peptide 32.0 pmol/L and 2 hours postprandial C-peptide 29.1 pmol/L). The occurrence of FT1DM was associated with COVID-19 vaccination.

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