

THE RISK OF DEVELOPING DIABETES MELLITUS (DM) IN CHILDREN AFTER A CORONAVIRUS INFECTION

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Abstract:

This article reviews possible risk of developing diabetes mellitus (dm) in children after a coronavirus infection

Keywords: diabetes mellitus, coronavirus, infection, virus, recontamination, insulin, polydipsia, polyuria, sugar rise.

Introduction

Scientists from the US Centers for Disease Control and Prevention conducted a study on the development of diabetes as a consequence of the coronavirus in children and found that COVID-19 increases the risk of developing diabetes in children. It turned out that in children who had been ill with coronavirus, the risk of developing diabetes is 166% higher than in those who did not have COVID. The reasons why coronavirus provokes the development of diabetes in children have not yet been clarified, and at the same time there are three main versions. First, SARS-CoV-2 damages pancreatic cells that synthesize insulin. Second: in children with coronavirus, blood sugar levels rise (excessive release of cytokines produced to fight infection). Third: when the virus multiplies, inflammatory processes are activated that can affect glucose metabolism. The researchers noted that some children who developed diabetes after suffering from coronavirus were admitted to the hospital in a state of ketoacidosis, which develops mainly in type 1 diabetes mellitus in the absence of adequate treatment.

Clinical case. Child I., 1 year 10 months old, weight: 10 kg, height 84 cm, was admitted to the 4th City Clinical Hospital with a diagnosis of acute respiratory infection with hyperthermia syndrome. The condition is severe, he does not respond to the examination, he is sleeping. From 2nd pregnancies, first birth, on time. Pregnancy on the background of nephropathy in recent months. Rapid delivery, entanglement of the umbilical cord 2 times, cephalohematoma in the temporal region. She grew and developed normally, at 6 months she suffered covid 19, received dexamethasone, recontaminated with coronavirus at 1 year 6 months. Both cases were confirmed by PCR test. At the age of 1 year, 9 months, the girl became lethargic, stopped talking, refused to eat, appeared drowsiness, the smell of acetone from her mouth, polydipsia,

polyuria. In occasion of a frequent urination were treated with the diagnosis of cystitis. According to the mother, there are no patients with DM in the family (2-3 generations). Examined: UAC: 10/09/22 without any special features. Biochemistry 10.10.22. at 01:40 hour: protein-4.8; Glucose-13.1, creatinine-0.53, urea-2.4; 10:05h glucose-16.50; 20:00 - 15.6; 23:30-19.4. OAM: 10.10.22. protein 0.099; PH-6.0; glucose 3g/%; ketone.body +++; other fungi++. Ultrasound of the internal organs: no pathology was detected. PCR for covid neg. The child was consulted by an endocrinologist and diagnosed with type 1 diabetes, subcompensation stage. For further treatment, she was transferred to national children`s medical center.

Conclusion

Thus, it can be assumed that the twice contamination of covid infection may cause the development of DM in the child. The presented clinical case demonstrates the probable tropism of the SARS-CoV-2 virus to pancreatic cells. It is important to record and describe such clinical cases in order to systematize the data and develop criteria for diagnosing complications of the post-COVID period.