

Glucocorticoid therapy in ICU for COVID-19 patients with diabetes mellitus

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Abstract

Hyperglycemia during COVID-19 is associated with higher mortality, longer hospital stays, and increased costs. Glycemic decompensation is one of the complications of COVID-19 infection in patients with diabetes mellitus (DM), which may be manifested by intensification of glycemic corrective therapy, e.g. increasing insulin doses. Hyperglycemia /DM is not a contraindication to the appointment of glucocorticoids (GC), especially when at this stage they (especially dexamethasone) have a proven effect in the fight against COVID-19. Patients (both type 1 and type 2) who have been taking intensive or traditional insulin therapy before receiving GC, should continue to take their usual insulin regimen, increasing their total daily insulin dose by 30-100% and controlling their glycemia. There is no upper dose limit for insulin. Attention should be paid to the prescribed GC dose, the effect of their action and the presence of DM. Glucose monitoring should be performed several times a day continuously. It is recommended that for patients receiving insulin by pump, the dose of insulin (starting at 0.3-0.5 units/kg/day) be divided into three prolonged boluses at the time of GC appointment. Corrective insulin can be used if needed. There is also a risk of developing the following complications caused by hyperglycemia when prescribing GC: hyperosmolar condition (in the case of glycemia > 350 mg/dL), exicosis and its associated manifestations (hypovolemia and drop in blood pressure, thrombosis, blurred vision,), impaired immunity (urinary tract infections, nosocomial pneumonia). Therefore, the management of hyperglycemia during COVID-19 with proven GC efficacy is also a significant challenge, on which the outcome of the disease also depends.

Biography

Vakhtang Shoshiashvili is specialized in Anesthesiology and has a quite a few experience of regional anesthesia and pain management. He also contributed in treatment of cancer pain conditions. Since, 2013 he is an expert in anesthesia and intensive care at TSMU and Ministry of Health Care and Social Affairs Republic of Georgia. Currently, he is also an Associate Professor at European University and since 2016 is working as an Anesthesiologist at Research Institute of Clinical Medicine Tbilisi, Georgia.

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