

Hospital hyperglycemia may predict future diabetes

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Hyperglycemia during critical illness may be used as a warning of future diabetes. Researchers writing in BioMed Central's open access journal *Critical Care* have found a significant association between acute illness complicated with hyperglycaemia and the future development of type II diabetes or glucose intolerance.

Ivan Gornik worked with a team of researchers from University Hospital Centre Rebro, Croatia, to follow patients for 5 years after they were discharged from the hospital. There were 398 medical ICU patients who were normoglycaemic during their hospital stay, of whom 14 (3.5%) developed type II [diabetes](#). In the hyperglycaemia group 193 patients finished follow-up and 33 (17.1%) developed type II diabetes.

According to Gornik, "Despite the fact that endocrine and metabolic changes probably occur in all acutely ill patients, evident hyperglycaemia is not always present. We hypothesised that hospital acquired hyperglycaemia can therefore reveal a patient's predisposition to impaired glucose control, which could in future lead to diabetes".

The research team defined hyperglycemia as glucose ≥ 7.8 mmol/l and its incidence in the ICU was similar to that seen in other published work. Gornik said, "Our results suggest that patients with hyperglycaemia during acute illness, who are not diagnosed with pre-diabetes or diabetes during or immediately after hospitalisation, should be perceived as patients with increased risk of developing diabetes and should as such be regularly monitored and treated appropriately".

More information: A prospective observational study of the relationship of critical illness associated hyperglycaemia in medical ICU patients and subsequent development of type 2 diabetes, Ivan Gornik, Ana Vujaklija-Brajkovic, Ivana Pavlic Renar and Vladimir Gasparovic, Critical Care (in press), ccforum.com/

Provided by BioMed Central

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