Abstract till Diabetologiskt vårmöte 2019

Prehospital treatment with exenatide in hyperglycemic patients with stroke

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Abstract

Background: Hyperglycemia is a predictor for poor outcome in patients with acute ischemic stroke. Hyperglycemic stroke patients treated with recombinant tissue plasminogen activator are at an increased risk of symptomatic intracranial hemorrhage. Insulin is to date the gold standard for treating hyperglycemia in patients with stroke. Insulin treatment exposes the patient for a significant risk for hypoglycemia. Both clinical and pre-clinical studies have shown that treatment with glucagon-like peptide-1 receptor agonists (GLP-1RA) exert neuroprotective effects.
Aims: To determine if treatment of hyperglycemia with the GLP-1RA exenatide in stroke started prehospitally is feasible, efficacious and safe.
Methods: Randomized controlled trial comparing exenatide administrated prehospitally (in ambulance) with standard care for hyperglycemia. Patients with Face Arm Speech Test ≥1 and glucose >8 mmol/L, without prior antihyperglycemic treatment (except metformin) were randomized to exenatide or standard treatment. Glucose was monitored every fourth hour for 24 hours. Insulin was withheld for 4 hours in both groups. All adverse events were recorded.
Results: 19 patients were randomized, 8 received exenatide. No difference was observed in the main outcome of glucose at 4h with control vs. exenatide [mean, SD] (7.0 ± 1.9 vs. 7.6 ± 1.6; p=0.56). No major adverse events were reported.
Conclusions: Prehospital treatment with GLP-1RA seems feasible but does not affect hyperglycemia compared with no antihyperglycemic treatment. Larger studies are required to determine if stroke outcome is affected.