

Case report - glimepiride poisoning mimicking vertebrobasilar acute ischemic stroke

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Background:

Hypoglycemia is a dangerous adverse effect of some blood glucose-lowering agents like insulin and sulfonylureas. Sympathetic nervous symptoms and impaired consciousness are common in hypoglycemia, while paresis is rare and creates diagnostic difficulties. So far, only about 10 cases of paresis caused by sulfonylureas were described (including only one with persistent neurological deficits). We describe the case of the man with sulfonylurea induced hypoglycemia manifesting as acute encephalopathy with focal neurological signs misdiagnosed as posterior circulation acute ischemic stroke (AIS).

Case presentation:

A 64-year-old patient treated with glimepiride (2 BID) for type II diabetes mellitus, after radical prostatectomy for prostate cancer, was admitted to Stroke Unit in Rzeszow Regional Hospital No.2, Poland. Upon admission, the patient was unconscious, with upward gaze deviation, tetraparesis, extensor response to pain, bilateral positive Babinski's sign. Non-contrast head CT and CT-angiography did not reveal any abnormalities. Low serum glucose level (46 mg/dl) was noted and corrected with intravenous glucose infusion (80 mg/dl). Based on acute onset of focal neurological signs the initial diagnosis of AIS was made. Due to exceeding of treatment window, no reperfusion therapy was performed. In further serum glucose measurements hypoglycemia was noted. For the next 72 hours repeated intravenous glucose infusions were needed to maintain blood glucose levels above 70 mg/dl. Head MRI performed on the 3rd and 7th day did not reveal ischemic changes. Hypoglycemic encephalopathy due to glimepiride poisoning was diagnosed.

Conclusion:

Preoperatively taken sulfonylureas resulted in prolonged hypoglycemia misdiagnosed as AIS. Prolonged insufficient brain nutrition can result in permanent brain damage and cause impaired consciousness and focal neurological signs.

Keywords: Glimepiride, Hypoglycemia, Poisoning, Sulfonylurea