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Changes in blood glucose levels in diabetic patients following variable corticosteroid injections

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Objective

Steroid injections are used to treat a variety of pain conditions with the goal of decreasing pain. Typically we thought that steroids injection risks increasing blood glucose levels, especially diabetic patients. The aim of this study is to quantify diabetic patients' change in blood glucose levels after variable steroid injection and to assess which patient-level risk factors may predict an increase more in blood glucose levels.

Subjects and method

Twenty diabetic patients who receiving a variable steroid injection were included in this investigation. The typical normal morning fasting glucose and most recent hemoglobin A1c (<3months), age, injection site, variant patients' factor was recorded for each patient. After injection, patients were contacted daily to confirm their fasting morning glucose level for 7 days post-injection.

Results

There was a significant increase in fasting blood glucose levels following injection limited to post-injection days 1 and returned to near baseline levels around post-injection days 2. Higher hemoglobin A1c level and older age was significantly correlated with a rise in fasting blood glucose level 1day following injection while fasting glucose level checked before injection did not predict correlated. There is a significant rise in fasting blood glucose level post-injection days 1 in lumbar region steroid injection than limb joint steroid injection.

Conclusion

Patients with uncontrolled blood glucose were more likely to experience a rise in fasting glucose level on post-injection. So we advise caution in higher HbA1c and older age patients when considering steroid injection if glucose levels have been acutely unstable in the days preceding injection.