

Steroid-induced hyperglycaemia in hospitalised patients – assessing the current knowledge and practice of monitoring and diagnosis

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Aims

To assess the current knowledge and practice for monitoring and diagnosis of steroid-induced hyperglycaemia (SIH) in hospitalised patients.

Methods

This study was undertaken on six wards with high frequency of steroid use – oncology, respiratory and neurology – at a large tertiary care centre in the West Midlands, UK. Two anonymous 10-question online surveys – one for junior doctors and another for nurses and healthcare auxiliaries – were used to assess knowledge regarding SIH. The questionnaires were based on the recommendations by the Joint British Diabetes Societies for SIH and approved by the diabetes team at our trust following several discussions for appropriateness.

To assess current practice, patients prescribed with two or more consecutive days of oral and/or intravenous steroids during May 2016 in the above areas were assessed. Data for age, gender, history of diabetes, steroid dose, type, route and frequency were collected for each patient. The frequency of pre-evening meal capillary blood glucose (CBG) monitoring and confirmatory lab glucose for patients with CBG ≥ 11 mmol/L was measured. The data were analysed using Statistical Analysis Software Package version 23 (IBM Corp., New York, USA).

Results

Thirty junior doctors and 42 nurses and auxiliaries completed the survey assessing their knowledge. 50% of doctors, nurses and auxiliaries knew the diagnostic criteria for SIH. While 63% doctors knew the target capillary blood glucose (CBG) range once diagnosed, 70% did not know appropriate follow-up for patients diagnosed with SIH post-discharge. 97% of the nurses correctly reported appropriate monitoring frequency for SIH;

however, 25% did not know the correct timeframe to check for diagnostic CBG.

135 patients (median age 63 years, range 19–95 years; male: female ratio 1.5:1) were included. 19.3% of patients had been previously diagnosed with diabetes. Dexamethasone (51.9%) was the most commonly used steroid. Pre-evening meal CBG was measured in 55.6% of all patients and was 46.8% (51/109) in patients without diabetes, 92.3% (24/26) in patients with diabetes. 21.6% (11/51) of patients without diabetes had a pre-evening meal CBG ≥ 11 mmol/L. Of these, 18.2% (2/11) had lab glucose sent for confirmation of high CBG and none had their HbA_{1c} measured.

Conclusions

There is a need to improve the knowledge about SIH among healthcare professionals. These data indicate that current practice at the centre falls short of achieving the standards of blood glucose monitoring for patients receiving steroid treatment, as set out in the Joint British Diabetes Societies recommendations. ■

Conflict of interest statement

None.

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