Don’t Risk It For A Biscuit

A simple way of reducing nocturnal hypoglycaemia on renal wards

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Background
Data from the National Inpatient Diabetes Audit\(^1\) (NaDIA) on the renal wards at Hammersmith Hospital showed:

- Hypoglycaemia was common, particularly amongst dialysis patients
- Hypoglycaemic episodes were not always recorded and managed appropriately.

Hypoglycemia is potentially fatal – prompt recognition and appropriate management is required to avert risks of neuroglycopenia.

Imperial Healthcare Trust is one of the largest renal units in Europe. Diabetes prevalence is estimated to be 45%-50% in this cohort.

Renal patients are particularly vulnerable. Reasons for this may include poor nutritional status, reduced clearance of insulin, reduced hepatic gluconeogenesis and hypoglycemia.\(^2\)

Method
We wanted to find out whether the NaDIA findings were a genuine problem and if so what the root causes were?

The process of change:

- Data from the National Inpatient Diabetes Audit\(^1\) (NaDIA) on the renal wards at Hammersmith Hospital showed:
  - Hypoglycaemia was common, particularly amongst dialysis patients
  - Hypoglycaemic episodes were not always recorded and managed appropriately.

- Hypoglycemia is potentially fatal – prompt recognition and appropriate management is required to avert risks of neuroglycopenia.

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- We wanted to find out whether the NaDIA findings were a genuine problem and if so what the root causes were?

- The process of change:

  - Don’t Risk It For A Biscuit aimed to avoid nocturnal hypos in dialysis patients.

  - The campaign aspired to change behaviour by promoting a message on the wards for this group of vulnerable and high risk patients.

  - Message: If blood glucose is <10mmols/l at bedtime - prescribe 2 digestive biscuits

  - This was a collaborative approach involving renal dieticians, renal pharmacists and all ward staff.

  - Promotional materials including t-shirts, mugs and credit card sized reminders were used to reinforce the message.

  - Retrospective audit of in-patients on 3 renal wards asked the following questions:
    - How many hypoglycaemic events occurred?
    - What time of day did hypoglycaemic events occur?
    - Were they appropriately documented in notes?
    - Were they treated as per trust policy?

Results

- The same number of patients were re-audited on the 3 wards
- Hypoglycaemia episodes were reduced by almost two thirds
- And overnight episodes by more than three quarters
- Six of the noted overnight episodes could have been avoided with a snack before bed. One was a severe episode.
- There was nearly a 50% reduction of severe episodes in 2017
- There was only a slight improvement in documentation and adherence to guidelines - learning has now been addressed following this latest result

Discussion

This very simple and effective approach of prescribing two biscuits before bedtime is low cost to implement and is something any trust could employ.

It’s a good example of multidisciplinary team working.

Any concerns about snacks causing hyperglycaemia were unfounded.

Of course, this initiative didn’t exclude regular medication reviews which continued as normal.

Obvious as it seems, inpatients go for a long period of time without eating at the end of the day, unlike at home.

Realistically we have to sadly accept that we will never be able to eliminate all hypos, some things are out of the clinician’s control for example patients refusing to snack.

It was interesting to note that there was very little improvement in documentation. It was also found that although hypos were treated with quick acting glucose, long acting carbohydrate was not provided.

Next Steps

Constant reinforcement is essential for the continued success of this campaign.

Education of all clinicians needs to be ongoing.

References

1. National Diabetes Audit, 2015-6
2. Management of adults with diabetes on the haemodialysis unit; JBDS, 2016

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