UKINET Bitesize Guidance for the Nutritional Management of Insulinomas

Patients should be screened for malnutrition using a validated nutrition risk screening tool e.g. MUST, SGA, NRS-2002. Patients at risk should be referred to a dietitian. Specialist dietitian or clinical nurse specialist input is recommended alongside this.

Glucose Monitoring
There are no agreed guidelines on recommended frequency or method of glucose monitoring and should be guided by the MDT.

<table>
<thead>
<tr>
<th>Capillary Blood Glucose (CBG)</th>
<th>Continuous Glucose Monitoring (CGM)</th>
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<tbody>
<tr>
<td>• More accurate</td>
<td>• Less accurate than CBG, especially at lower levels</td>
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<td>• More painful</td>
<td>• Results often have a slight delay</td>
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<td>• Less practical</td>
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<td></td>
<td>• Can provide 24hr sensor glucose readings</td>
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<td></td>
<td>• Can have predictive low glucose alerts</td>
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<td>• Access can be challenging – liaise with diabetes teams regarding funding requests</td>
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For more information, please visit our website: www.ukinet.org
First Line Advice – Dietary Management

- Low glycaemic index (GI) diet based around wholegrain carbohydrates, fibre, protein and fats
- Educate on carbohydrate awareness early in diagnosis
- Regular meals and snacks
- Adjust amount, type and timing of carbohydrate if hypoglycaemia persists

Second Line Advice – Corn Starch

- Mix with water, milk, yoghurt or other cold fluids/desserts
- Start with 1g/kg body weight, or ideal body weight for those with obesity, every 4 to 6 hours
- Titrate dependent on frequency and severity of hypoglycaemia e.g. increasing by 10-30% at a time or reducing the gap between carbohydrate intake
- Taken in addition to or instead of meals/snacks
- An overnight/3am dose of corn starch may be needed
- Monitor gastrointestinal symptoms e.g. bloating, wind, altered bowel habits
Third Line Advice – Modified Corn Starch Products e.g. Glycosade

- Mix with water, milk, yoghurt or other cold fluids/desserts
- Match or exceed the current tolerated corn starch dose
- Titrate dependent on frequency and severity of hypoglycaemia e.g. increasing by 10-30% at a time or reducing gap between carbohydrate intake
- Take in addition to or instead of meals/snacks dependent on the timing and severity of hypoglycaemia
- Associated with fewer gastrointestinal side effects

Fourth Line Advice – Artificial Nutritional Support

- Consider enteral feeding if unable to prevent hypoglycaemia orally
- Ensure there is a contingency plan in the event of loss of access
- Consider gastrostomy or jejunostomy feeding instead of nasal feeding tubes to reduce displacement risk

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- If enteral routes are contraindicated, consider parenteral nutrition
## Hypoglycaemia Management

- <3.5 mmol/L is best practice however the threshold can be adjusted to <3.5 mmol/L - 4.0 mmol/L based on the individual level of risk
- Confirm hypoglycaemia with CBG
- If glucose <3.5 mmol/L treat with 15-20g rapid acting carbohydrate e.g. 4-5x Jelly Babies, 4-5x glucose tablets, 150-200ml orange juice
- Check CBG after 10-15 minutes. If still <3.5 mmol/L take a further 15g rapid carbohydrate.
- Repeat until >3.5 mmol/L. Seek medical help if hypo persists after 3 treatments
- Once glucose levels >3.5 mmol/L, either follow with the next meal, if due, or 15-30g of slower acting carbohydrates e.g. 1-2x slices of granary toast, 1-2x piece(s) of fruit
- Hypoglycaemia unawareness can occur if glucose levels are persistently low, increasing risk of severe hypoglycaemia. Glucose sensors with alerts can be useful to manage these effects

## Additional Considerations

- Weight gain is likely due to the nutritional support provided
- Some treatments are weight positive e.g. diazoxide and corticosteroids
- Minimising weight gain may be possible by replacing higher fat foods with lower fat options while adhering to other dietary principles