

Management of High Output Stoma

Key Points

- High output stoma is defined as $\geq 2\text{L}$, or enough to cause electrolyte to derange and/or weight loss (BAPEN)

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Abbreviations

BAPEN	British Association for Parenteral and Enteral Nutrition
BMI	Body Mass Index
BP	Blood Pressure
U&Es	Urea and Electrolytes
Mg2	Magnesium
LF	Low Fibre
IV	Intravenous
K+	Potassium Test
SADU	Surgical Assessment Day Unit

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Summary

High output stoma is defined as $\geq 2\text{L}$, or enough to cause electrolyte to derange and/or weight loss (BAPEN)

Patients should be reviewed **DAILY** by the Ward Doctors Team.

If incomplete response **after 72 hours of optimised treatment**, refer to Gastroenterology Consultant

Objectives of the protocol:

- Correct electrolytes disturbances
- Address and resolve stoma bag issues

Exclude potential causes:

• Intra-abdominal sepsis • Bowel obstruction • Enteritis (including C. difficile and salmonella) • Disease in remaining bowel (including Crohn's or radiation-induced)	• Consider it being caused by drug withdrawal (e.g., sudden withdrawal of steroids or anticholinergics) • Consider stopping any prokinetic agents (e.g., laxatives, metoclopramide, domperidone, erythromycin)
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Initial management:

- IV fluids (if clinically indicated)
- Record accurate fluid intake and output (including daily stoma output)
- Restrict oral hypotonic fluids to 1L (i.e., water, tea, coffee, fruit juice)
- Daily U&Es, bone profile and Mg^{2+} with corrections
- Nutritional screening (including weight, BMI and % weight loss)
- Low Fibre menus (LF option available at WPH)

Start oral rehydration therapy:

While stoma output $>2\text{L}$ use Dioralyte® 10 sachets in 1 litre of water and give 200ml five times a day (1 litre over 24 hours).

If hyperkalaemic, use St Mark's Electrolyte Mix 1L given over the course of the day. Flavour with lemon/lime squash if desired, within the 1000mls

For oral rehydration therapy advice and electrolyte replacement, see reverse

Start pharmacological therapy:

- Start **Omeprazole** 40mg twice daily 30 minutes before breakfast and dinner and **Loperamide** tablets/ orodispersible tablets 4mg 4 times a day, 15 minutes before meals
- Increase **Loperamide** tablets to 8mg 4 times a day (32mg/day), 30 – 60 minutes before food
- Add **Codeine** 30mg four times a day. Can titrate up to 60mg 4 times a day
- Titrate **Loperamide** by 2mg four times a day as required, up to 20 mg 4 times a day (i.e., 80mg/day in divided doses).

Doses higher than this are possible, but need Gastro Consultant input

*****High doses of loperamide have been associated with serious cardiac events*****

Electrolytes Derangement Guide

Replacement should be determined on an individual patient basis

Magnesium Replacement

The use of oral magnesium salts for replacement can increase stoma output; magnesium glycerophosphate tablets may be considered when output decreases.

Moderate Hypomagnesaemia (serum magnesium 0.5-0.7mmol/L)

IV magnesium: 4 mmol of magnesium sulphate 50% in 1L sodium chloride 0.9%/dextrose 5% over 2-6 hours.

Severe Hypomagnesaemia (serum magnesium 0.3-0.5 mmol/L)

IV magnesium: 8 mmol of magnesium sulphate 50% in 1L sodium chloride 0.9%/dextrose 5% over 2-6 hours.

Less than 0.3mmol/L

IV magnesium: 10-20mmol of magnesium sulphate 50% in 1L sodium chloride 0.9%/dextrose 5% over 6 hours.

Monitoring

Monitor serum Mg levels, blood pressure, respiratory rate, heart rate, urinary output, after every administration.

Potassium Replacement

Hypokalaemia is not a common issue for the majority of patients with high output stoma. Use double strength Dioralyte ® over St Mark's as 10 sachets will provide 40 mmol of K+ (BNF)

Phosphate replacement

- **Mild hypophosphataemia (serum phosphate 0.6- 0.69 mmol/L)**
 - No treatment usually required. Re-check serum phosphate after 24 hours.
- **Moderate hypophosphataemia (serum phosphate 0.5- 0.6 mmol/L)**
 - IV Phosphate Polyfusor® 0.1- 0.2 mmol/kg, over 6-12 hours.
 - A total maximum dose of 50mmol per infusion should not be exceeded.
 - During periods of Polyfusor® shortage use:
 - Glycophos® Sodium glycerophosphate 21.6% IV, 1 vial (20ml) = 20 mmol phosphate and 40 mmol sodium
 - Prescribe:
 - 20mmol phosphate (1 vial) in 250ml of glucose 5% or sodium chloride 0.9%
 - 40mmol (2 vials) in 500 ml of dextrose 5% or sodium chloride 0.9%. Administer over 8 hours.
- **Severe hypophosphataemia (serum phosphate < 0.5 mmol/L)**
 - IV Phosphate Polyfusor ® 0.2 -0.5 mmol/kg, over 6-12 hours.
 - A total maximum dose of 50mmol per infusion should not be exceeded.
 - **Note:** reduced doses and longer infusion times (12-24 hours) are required in patients with impaired renal function; please contact the Nutrition Support Team for advice.
 - Phosphate Polyfusor® is an intravenous preparation containing for each 500ml: 50mmol phosphate, 9.5 mmol potassium and 81 mmol of sodium.
 - Patients with hypocalcaemia should have their calcium corrected before replacing phosphate to prevent further hypocalcaemia.
 - Monitoring: check electrolytes: calcium, phosphate, potassium, sodium, serum creatinine and BP.

Oral Rehydration Advice

Do not add ice to Dioralyte, or St Mark's electrolyte mixture as this will dilute the mixture. They can be chilled in fridge or add a few drops of cordial to make more palatable for the patient.

St Mark's Electrolyte Mixture – Formulation available on the intranet:

Glucose powder 20g (SIX level 5ml spoonfuls)
Sodium bicarbonate 2.5g (ONE heaped 2.5ml spoonful)
Sodium chloride 3.5g (ONE level 5ml spoonful)

Dissolve the ingredients in 1 LITRE of water. The taste improves with refrigeration. Ensure the solution is made freshly each day and is discarded after 24 hours.

Individual ingredients are available as stock in the drug cabinet store on:

- SADU, F7, F8, F9 at Frimley Park
- Ward 2 and ward 10 at Wexham

They are also available to order from Pharmacy.

Patient should be reviewed by ward doctors daily

Please refer to dietitians
Dietitian bleep Frimley 5637, Wexham ext 153232

Stoma Nurse Specialists contact details:
Frimley – Bleeps -5481/5226 Ext 136301
Wexham Ext 153734

References

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Phosphate Polyfusor® SPC –available on www.medicines.org.uk

Full version control record

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Contributor(s):	Deborah Cottrell - Colorectal/Stoma CNS
Lead Director / Chief of Service:	Dr Yohan Samarasinghe, Medical Directorate Lead
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This guideline is for use in Frimley Health NHS Foundation Trust hospitals only. Any use outside this location will not be supported by the Trust and will be at the risk of the individual using it.

Version Control Sheet

Version	Date	Guideline Lead(s)	Status	Comment
1	April 2021	Gastroenterology Consultant	Final	Cross site
1.1	June 2023	Clinical Guidelines Administrator	Interim	Transferred onto the current template
2.0	June 2024	Gastroenterology Consultants Colorectal/Stoma CNS	Final	

Related Documents

Document Type	Document Name
Pharmacy Form	Medicines Information Bulletin 2019-02 – 8 August 2019, available on the Intranet