**MANAGEMENT OF HIGH OUTPUT STOMA &**

**ENTEROCUTANEOUS FISTULA**

**Introduction**

A high output stoma (HOS) is likely to become clinically significant when the effluent consistently exceeds 1.5L-2L every 24 hours. The small bowel will be unable to absorb sufficient electrolytes, fluid and nutrition, this may result in dehydration, electrolyte disturbances and in the long term malnutrition.

**Signs and Symptoms**

 Watery stoma output

 Increased frequency in stoma bag changes

 Possible leaking of stoma bags

 Hypomagnesaemia

 Hyponatremia

 Low urinary sodium (less than 20mmol/L)

 Thirst

 Hypotension

 Vitamin and trace element deficiencies

**Possible causes**

 Intra-abdominal sepsis

 Partial/intermittent bowel obstruction

 Enteritis

 Recurrent disease (eg. IBD)

 Suddenly discontinued medication (eg. steroids, opioids)

 Pro-kinetics (metoclopramide, domperidone, erythromycin)

 Short bowel syndrome

**Monitoring Required**

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| Fluid balance | Accurate daily fluid balance including all intravenous, enteral and oral intake and administration |
| 24hour stoma chart | Total stoma output recorded separately each day to show any trends and the impact of interventions made |
| Food record chart | All food intake including supplement drinks |
| U&E, Mg, Ca, PO4 | ‘TPN’ bloods at least three times per week |
| Urinary sodium | If blood results show hyponatremia, to exclude high urinary losses |
| ‘TPN Trace elements’ | If there has been a high output for > 3 months. Repeat every 6-12 months for long term patients |

**Dietary Management –** [**High OP stoma patient diet sheet 2017.pub**](https://nww.bsuh.nhs.uk/clinical/teams-and-departments/pharmacy/prescribing-guidelines/9-nutrition-iv-fluids-and-blood/copyof-96-high-output-stoma-patient-diet-sheet/)

 Encourage a high energy and high protein diet

 Encourage low fibre starchy (carbohydrate) foods with every meal e.g. potatoes (avoiding skins), white rice/pasta/bread, low fibre breakfast cereals e.g. rice crispies or cornflakes

 Encourage snacks between meals

 Avoid high fibre food e.g. whole grains, beans, pulses, the skins/stalks/seeds of fruits & vegetables, nuts, seeds and porridge

 **Limit oral drinks (excluding St Marks solution) to 1000ml per day, and advise to sip slowly throughout the day**

 Discourage drinking fluids with meals – aim to leave a gap of 30 minutes before and after meals

 If evidence of persistent hyponatremia the patient may benefit from adding salt to food and including salty snacks

Foods to **include** to help thicken the output:

 Low fibre carbohydrates (pasta, rice, white bread, potatoes without skins)

 Gelatine containing foods (marshmallows, yoghurt, jelly, fruit gums)

 Eggs, cheese, milk puddings

 1 banana a day

Foods to  **avoid** which may loosen the output

 Raw fruit and fresh fruit juice

 Raw vegetables (includes salad)

 Spicy foods

 Fried and fatty foods

 Leafy green vegetables

 Some sweeteners or foods and sweets that contain sweeteners e.g. Sorbitol, xylitol or mannitol

**Drug Management**

 Medication can be used to reduce the stoma output by reducing gastric secretions and prolonging the transit time

 Clearly document all changes and dose titrations so that their effect can be measured against the fluid balance charts

 Ideally changes to medication should be made one drug at a time where possible to ensure all medications are prescribed at the lowest effective dose

 See Refeeding guidelines for the management of electrolyte deficiencies. Be aware that many oral electrolyte supplements are likely to exacerbate a high output stoma

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| Loperamide **tablets \*** | Starting dose 2 - 4mg QDSTitrate up in 2 - 4mg increments every 1 - 2 days as requiredMaximum of 24mg QDS | 30 minutes before food Avoid capsules and liquid formulations |
| Codeine | Starting dose 30mg QDSTitrate up to 60mg QDS after 2 daysIntroduce when loperamide dose has reached 6 – 8mg QDS Caution – may accumulate in an AKI | 30 minutes before foodLower starting doses may be need if patient sensitive to opioids |
| Lansoprazole fastabs **\*** | Starting dose 30mg BD,Introduce or titrate up the dose if already prescribed for another indication after both loperamide and codeine have being initiated | Not absorbed sublingually, absorbed in the small bowelMay exacerbate hypomagnesaemia |
| Octreotide **\*** | 50 micrograms SC TDS titrate up by 50 micrograms SC TDS every 2 days. If no effect at 200 micrograms TDS stop.This has a relatively low success rate on reducing the output and should be reserved until loperamide, codeine and lansoprazoledoses have been optimised | Warm injection before use |
| St Marks solution | 1 L sipped over 24 hours. This can be introduced at any time and is most effective when coupled with a 1L fluid restriction on all other hypotonic fluids including; water, tea, coffee, Lucozade, squash | Keep cold. Add cordial before diluting and sip through a straw to make more palatable |
| Glandosane spray orBiotene gel | 1-2 sprays every 2 hours when needed | Useful adjunctive to relieve symptoms of thirst and help patients adhere to the fluid restriction |

**\*** These are all unlicensed indications for the listed medications

**St Marks Solution**

 6 teaspoons (20g) glucose powder

 1 level teaspoon sodium chloride (table salt)

 ½ teaspoon sodium bicarbonate

 1 litre tap or bottled water

Mix all the ingredients together and chill in the refrigerator

The solution can be flavoured with cordial or squash but it must not be diluted with any more water

The solution should be sipped throughout the day

Limit all other fluids (including tea, coffee and soft drinks etc.) to 1 litre each day

**Stoma Nurses Contact**:

x 64215 or bleep 8267

**Lower GI surgical team bleeps**: F1 8204/ 8440/ 8871

SHO 8482

Reg 8613

**Dietitians Referral**: [https://nww.bsuh.nhs.uk/clinical/teams-and- departments/dietetics/adult-inpatient-team/adult-inpatient- dietitian-referral/](https://nww.bsuh.nhs.uk/clinical/teams-and-departments/dietetics/adult-inpatient-team/adult-inpatient-dietitian-referral/)

**Pharmacy Medicines Information:** x 8153

**References:**

The surgical management of patients with acute intestinal failure, Association of Surgeon of Great Britain and Ireland, September 2010.

Guideline of management of patients with short bowel, J Nightingale,

January 2006

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