NHS
Thames Valley

MANAGEMENT OF CAPECITABINE INDUCED DIARRHOEA

This must be printed off as a guide whilst assessing a patient and filed with patient notes

Severe capecitabine induced diarrhoea is an unpredictable side effect of this chemotherapy drug. A small percentage of patients who experience mild diarrhoea will progress to severe symptoms. If not diagnosed early and managed aggressively the diarrhoea can lead to death. The drug causes mucositis of the whole intestinal tract, from large bowel up to the stomach, oesophagus and oral cavity. This leads to secretary diarrhoea and bowel stasis, with pooling of fluid in the large and small bowel especially. The patient often appears well initially, with stable observations, however the situation can change rapidly as the pooling of fluid increases and is often not apparent as the patient has used loperamide to manage symptoms at home.

This guideline aims to ensure that key indicators for the acutely ill patient are assessed and gives specific guidance on the management of the diarrhoea.

The key to patient management is **EARLY DIAGNOSIS** and **AGGRESSIVE FLUID REPLACEMENT** to prevent Acute Kidney Injury and Acute Tubular Necrosis. Intense monitoring of patient is vital.

Follow this guide from when a patient is being assessed in Triage or Emergency department.

INITIAL ASSESSMENT

History/examination: areas to assess in addition to normal clerking

Diarrhoea:		**RED FLAG symptoms**:
Frequency of bowl movement in 24 hours: Mild <4 Moderate 4-6 Severe >6 or incontinence		Fatigue/falls or dizziness: Record performance status
		Incontinent of faeces
		Confusion/reduced GCS
		Excessive thirst
Use of anti-diarrhoeals: type and how much		Poor urine output/dark urine
How many days capecitabine taken out of the course		Co existing sepsis
		Nausea/vomiting

Track and trigger score (Observations): note some patients do not trigger in late stages

INVESTIGATIONS

- **Blood tests:** Serum full blood count, biochemistry, magnesium, CRP including blood gases & lactate
- **Plain AXR** to assess for gross signs of colitis/ileitis
- **Blood cultures** if sepsis or if acutely unwell AND without fever

If patient has any of the RED FLAG symptoms and/or abnormal blood results especially renal impairment or high lactate, then patient is likely to be more unwell than you think.

Treat as per the guidance below

IMMEDIATE MANAGEMENT: first 24h

- **Commence IVI immediately**: the patient will already be in negative fluid balance as will have had a few days diarrhoea at home
- Remember aggressive fluid replacement is vital e.g. 4hly fluid may be required initially see 'acute fluid resuscitation guidance' (in development).
- Urinary catheter and hourly urine output
- 1-2hourly observations depending on patient acuity
- Doctor review of fluid balance 2 hourly
- Registrar review within 4h admission

The following is a quick guide:

Fluid of choice: Hartman's solution

- Give 250ml boluses until circulatory parameters (heart rate, BP, postural drop) stabilises and urine output improves.
- Baseline U+Es should be noted, and where U+Es are abnormal, repeat U+E measurements 6-8 hrs later will help guide adequacy of hydration.
- Initial resuscitation may involve 3-4 litres of fluid or more.
- Advice from ITU is required if circulatory parameters are not stabilizing or urine output not improving despite 3L of fluids.
- Once circulatory parameters stabilize and urine output improves (this would imply that the fluid deficit has been largely corrected), use maintenance fluids according to fluid balance chart i.e. guided by fluid loss (including diarrhoea) and adequacy of oral intake.

Use 250ml boluses if circulatory parameters/urine output deteriorate (i.e. continue hourly monitoring in the first 24hours of slowing down fluid to maintenance levels).

OTHER ISSUES TO MANAGE

- Complicating **sepsis** may require antibiotics: tazocin to cover gram negative organisms
- If confirmed neutropenia start neutropenic sepsis antibiotics as per trust protocol
- VTE prophylaxis
- Start **octreotide 100ug** s/c tds (see below)

INSTRUCTIONS TO NURSES

Start strict stool chart including weighing of nappies for incontinent patients

Strict fluid balance, hourly urine output

Ensure nurses know that fluids must be administered on time, any delays to be reported to doctor on call

Nurse coordinating should be informed so that nurse caring for patient can have their workload reviewed in order to provide more intensive monitoring of patient

CONTINUING MANAGEMENT

Essential that **fluid balance is reviewed regularly**, initially every 2hours for first 24-48h

On admission patient must be reviewed by **Oncology Registrar on call or hospital at night registrar**

Thereafter patient must be reviewed by a Registrar or CMT doctor at least twice daily, morning and end of shift or seen more frequently as determined by patients' condition (ideally same doctor should care for the patient where possible on a daily basis).

Handover to on call doctor to review patient and fluid balance chart on evening shift/hospital night

DAILY INVESTIGATIONS

First 72hours blood tests should be performed **twice daily** including lactate and blood gases as indicated

Thereafter daily blood tests to monitor electrolyte losses if patients condition stable

SPECIFIC MANAGEMENT OF DIARRHOEA

Commence octreotide 100ugs subcutaneously, three times per day or via a 24h infusion (will add another pump to patient)

Can titrate octreotide up to 300ugs subcutaneously, three times per day (in severe cases doses of up to 1500micrograms in 24 hours have been used)

Octreotide may affect glucose regulation therefore patients on octreotide should have blood glucose monitoring.

****Note: Octreotide is unlicensed for SACT induced diarrhoea. Please refer to local Trust medicine management for guidance.****

Although loperamide are used to slow gut transit time to improve symptoms of diarrhoea, they do not treat the underlying cause i.e. mucositis and can give a false picture of resolving diarrhoea. We do not recommend use routinely for this situation as masks fluid losses.

OTHER POINTS

Severe diarrhoea, give **regular medicines IV** as there may be reduced absorption

Perform **early CT scan to assess degree of intestinal stasis** i.e. degree of fluid filled bowel or stomach. This may help guide decisions surrounding nutrition e.g. patients with fluid filled stomach and oesophagus should be kept NBM as there is a risk of aspiration and will unlikely absorb anything taken orally.

Consider **early use of TPN**, as patients often malnourished prior to admission and especially in patients with on going diarrhoea.

For **elderly patients: echocardiogram** can be done to assess underlying cardiac function, so as to help guide limits of fluid challenge

IF IN DOUBT ASK ITU FOR ADVICE AND GUIDANCE

References:

- Guidance on Management of Diarrhoea during Cancer Chemotherapy.
- Andreyev et al Lancet Oncology vol 15 Sept 2014

NHS
Thames Valley

MANAGEMENT OF CAPECITABINE INDUCED DIARRHOEA

CHECKLIST: print and file with admission clerking

Patient Sticky label:

Action	Tick when completed or explain why not done	Sign
Diarrhoea history taken		
Red flag symptoms noted		
Track and trigger reviewed		
FBC, U/E and creatinine, magnesium, CRP including blood gases and lactate done		
AXR		
If septic or neutropenic have Blood cultures been taken?		
IVI and Hartmanns commenced		
Completed VTE on EPR		
Urinary catheter and hourly UO		
Instructed nurses re frequency of monitoring obs (1-2hly)		
Instructed nurses re strict fluid balance and stool chart		
Instruct nurses to ensure IV fluids given on time. Any delays to be reported to doctor		
Prescribed octreotide 100mg s/c tds		
Informed registrar on call to review patient in next 4 hours		
Informed nurse coordinating ward re acuity needs of patient		
Review regular meds and decide if need to give IV (reduced absorption)		