



A/Prof Ghauri Aggarwal

FRACP, FACHPM, FPPMANZCA

Palliative Care Physician

Sydney, Australia

Lower GIT & Bowel Obstruction

CONCORD CENTRE FOR PALLIATIVE CARE



Bowel History

- What aspects in the bowel history do we need to know?



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CONSTIPATION History

- Frequency
- Consistency
 - description of stools - hard pebbles, thin ribbon like paste / loose
- Onset (chronicity)
- Previous bowel pattern
- Prior bowel problems
- Painful defaecation
- Need to strain
- Environmental factors



CONSTIPATION History

- contenance
- blood / mucous
- sensation with defecation
 - Complete/incomplete
- Impact on the patient
- dehydration / hot weather
- medication - opioids, anticholinergics, antacids, anticonvulsants, iron, laxatives
- food



What do we do next?



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EXAMINATION

- ABDOMEN - distension, tenderness, mass
- PR
 - extremely important
 - hard faeces, loaded rectum, empty or soft faeces
- MASS WITH OUTLET OBSTRUCTION / PROSTATE
- EMPTY NORMAL RECTAL SIZE
- BALLOONED RECTUM
- HAEMORRHOIDS / FISSURE
- SPHINCTER TONE - eg lax tone with spinal damage



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INVESTIGATION

- AXR
 - erect and supine
 - Faecal loading
 - dilated bowel loops
 - number and distribution of fluid levels



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SUPINE

)/CE
.53.5mm
.0D
{=1.3
261, 272)

N



L = 43
W = 344
6834:21
RAL & IV CONTRAST

(ped II

P

2.0s
L/10
SU/FF/VFF
FC10/ORG/P
ULTRASCAN AUBURN



Clark, Currow Palliative Medicine 2013

- **30% of general population**
- 30 – 100% prevalence in Palliative care populations
- 40 – 70% patients treated with laxatives still continue to experience symptomatic constipation
- **Negative impact on their quality of life**
- Disturbance in neuro-muscular function of colon
- Disturbed neuro-muscular structures of defaecation
- Mixed pattern
- Structured approach to assessing constipation: more rationale prescribing around constipation



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Table 4 Causal and contributing factors to constipation in palliative care patients (adapted from Sykes, 2004)

Organic factors:

Pharmacological agents Antacids, anti-epileptics, anti-emetics (5-HT₃ antagonists), antihypertensives, antiparkinsonians, anticholinergics, antidepressants, antitussives, antidiarrhoeals (when used in excess), cancer chemotherapies (vinca alkaloids), diuretics (when causing dehydration), iron (orally administered), opioid analgesics, neuroleptics

Metabolic disturbances Dehydration (fever, vomiting, polyuria, poor fluid intake, diuretics), hypercalcaemia, hypokalaemia, uraemia, hypothyroidism, diabetes

Neurological disorders Cerebral tumours, spinal cord involvement, sacral nerve infiltration, autonomic failure (primary such as Parkinson's disease, multiple sclerosis, motor neurone disease; or secondary to cancer or diabetes)

Structural abnormalities Pelvic tumour mass, radiation fibrosis, painful anorectal conditions (haemorrhoids, anal fissure, perianal abscess), uncontrolled cancer-related pain or other pain such as movement-related pain or breakthrough pain

Functional factors:

Diet Poor appetite and low amounts of food intake, low-fibre diet, poor fluid intake

Environmental Lack of privacy, comfort or assistance with toileting

Other factors Advanced age, inactivity, decreased mobility, confined to bed, depression, sedation



Clark et al, Palliative Medicine, 2010

- Risk factors are multifactorial
 - Opioids
 - Morphine equivalent dose (higher the dose the more laxatives was prescribed)
 - Total anticholinergic load (higher the load the more laxatives)
 - Deteriorating functional status
 - Progressive disease
 - Length of stay in hospital/hospice
 - Opioids: also have an anticholinergic load
 - There is some evidence to suggest that fentanyl may cause less constipation than other opioids



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How do you manage constipation?



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ORAL LAXATIVES

■ PREDOMINANTLY SOFTENING



LUBRICANT (Liquid paraffin)

BULK FORMING (methyl cellulose, ispaghula)

MACROGOLS (movicol)

SURFACTANT (Coloxyl)

OSMOTIC (lactulose, sorbitol)

SALINE LAXATIVES (Mg / Na sulphate)

ANTHRACENE (senna, danthron)

POLYPHENOLICS (bisacodyl)

■ PREDOMINANTLY PERISTALTIC



RECTAL LAXATIVES

- PREDOMINANTLY SOFTENING



LUBRICANT (olive oil)

OSMOTIC (glycerol, sorbitol)

SURFACTANT (coloxyl, bisacodyl)

SALINE LAXATIVES (microlax, travad)

POLYPHENOLICS (durolax)

- PREDOMINANTLY PERISTALTIC



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Side effects of laxatives

- Colic
- Flatulence
- Abdominal distension
- Loose stools
- Diarrhoea
- Nausea
- Bowel obstruction
- Bowel perforation
- Dehydration



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The hand that writes the opioids

- Writes the laxatives!



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Other references

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BOWEL OBSTRUCTION



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INCIDENCE OF BOWEL OBSTRUCTION

- 5.5 - 42% Ovarian cancer
- 10 - 28.4% Colorectal cancer
- 3% of all terminally ill patients
- 15% in major Palliative Care Units



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CAUSES OF BOWEL OBSTRUCTION IN MALIGNANCY

- Extrinsic occlusion of lumen
 - tumours of splenic flexure - 49%
 - tumours (R), (L) colon - 25%
 - tumours of rectum 6%
- Intraluminal occlusion
- Intramural occlusion
- Intestinal motility disorders
 - infiltration of mesentery, muscle, nerves, plexus
- Tend to look at proximal or distal to the splenic flexure
 - *Frago et al 2014*



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BEWARE!

- FAECAL IMPACTION
- Benign causes
 - inflammatory strictures and adhesions
 - radiation induced strictures and adhesions
 - benign intussusception
 - THE MIXED PICTURE



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What do you want to know?

- Pain
 - Background versus colic
 - Analgesics and route of deliver
- Differentiate between nausea and vomiting
- Bowel history
- General condition and other symptoms
- Psychosocial aspects of the patient



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SYMPTOM PROFILE

- Intestinal colic 72-76%
- Continuous abdominal pain 92%
- Vomiting 68-100%
 - nausea vs. vomiting
 - intermittent vs. continuous
- Abdominal distension
- Flatus and borborygmi
- Anorexia / desire to eat
- Constipation / diarrhoea



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What investigations do you order?



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Radiology

- AXR – erect and supine
 - Fluid levels and dilated colon
- Contrast enema and x-ray
 - Confirm the diagnosis and defining the location
 - Sensitivity 80%
 - Specificity 100%
- CT scan
 - Most common
 - Sensitivity 96% and specificity 93%
 - Location and staging
 - Triple contrast (venous, oral and rectal)
- Colonoscopy
 - Site and cause and possible to insert a stent

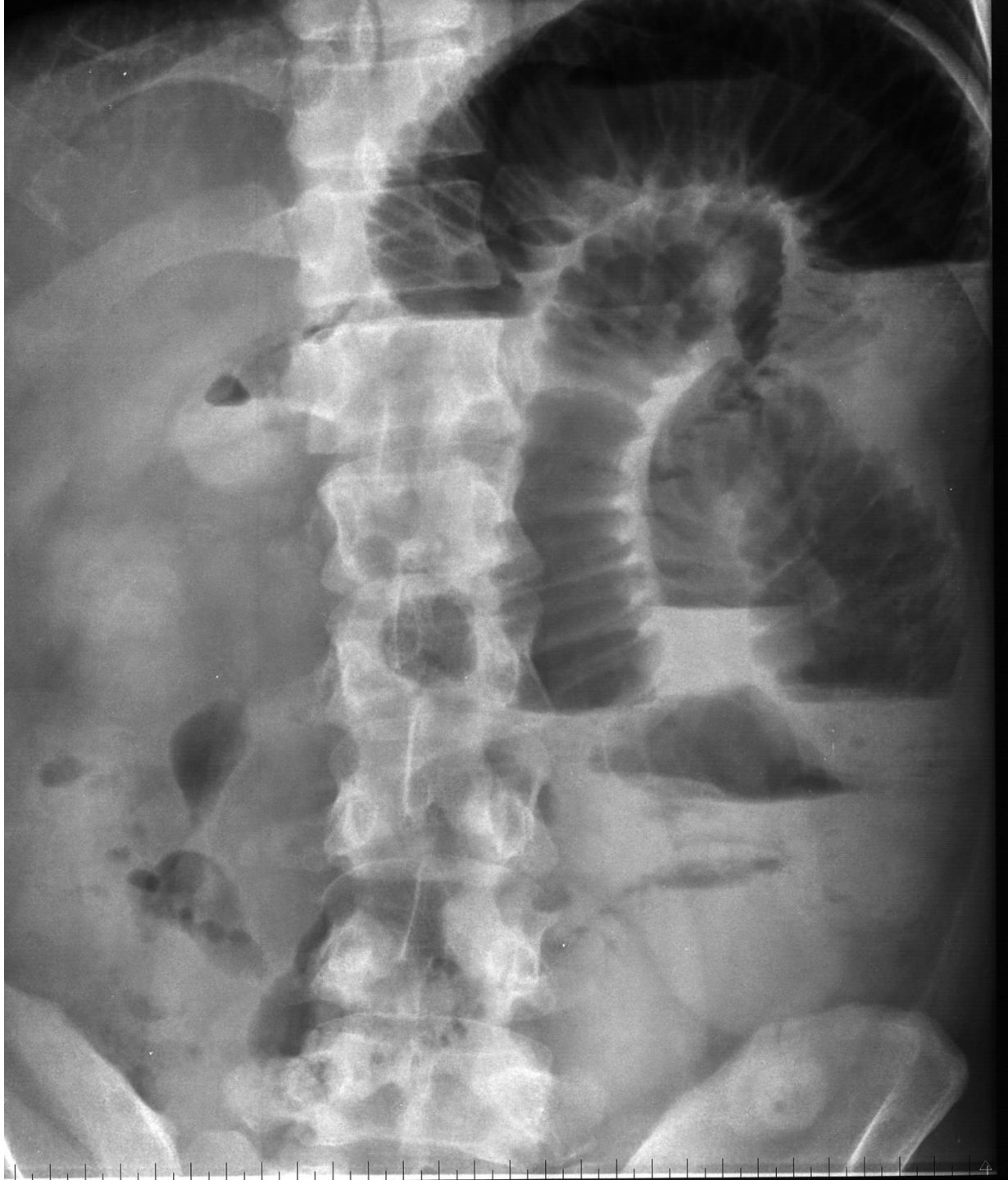


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EMBBS





How do you manage Bowel Obstruction?



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What is the best management for this man?

- Management of symptoms
- Ask: Is surgery indicated?
 - Elective or emergency
 - Stent possible?
- Management of underlying cancer
 - Are there options?
- Hydration and feeding
- Psychological management



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SURGERY

- Surgery should be considered for every patient presenting with bowel obstruction
- However,
 - rate of inoperable patients 6 - 50%
 - causes:
 - extensive tumour
 - multiple partial obstruction
 - technical / surgical correction impossible
 - Higher inoperable rates in patients with advanced disease



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POOR PROGNOSTIC FACTORS FOR SURGERY

- Intestinal motility / diffuse intraperitoneal carcinomatosis
- severe cachexia
- age over 65yr
- ascites
- poor nutritional status / low serum albumin
- previous radiotherapy to abdomen / pelvis



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POOR PROGNOSTIC FACTORS FOR SURGERY

cont'd

- palpable intra-abdominal masses and liver involvement, or distant metastases, pleural effusion or pulmonary metastases
- multiple partial bowel obstruction with prolonged passage time on barium examination
- poor performance status



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COMPLICATIONS AND LENGTH OF SURVIVAL AFTER SURGERY

Authors	No. Patients	Primary Cancer	30-Day Mortality (%)	Other Operative Complications (%)	Survival (mo)
Soo et al. ¹³	64	Gynaecology	11	15.5	2.5 median
Lund et al. ¹²	25	Ovary	32	32	2.0 median
Rubin et al. ¹⁸	43	Ovary	9	11.5	6.8 median
Castaldo et al. ²⁴	23	Ovary	13	43	17% 1yr
Clarke-Pearson et al. ⁴³	49	Ovary	14	49	4.5 median
Krebs and Goplerud ¹⁶	98	Ovary	12	12	3.1 median
Tunca et al. ¹¹	90	Ovary	14	-	7.0 mean
Piver et al. ¹⁵	60	Ovary	16.5	31	2.5 median
Beattie et al. ⁴²	11	Ovary	9	9	7.0 mean
Walsh and Schofield ²	36	Various	19		11 median
Aranha et al. ⁴⁵	40	Various	27.5	22.5	7.0 mean
Aranha et al. ⁴⁵	26	Various	46	15.0	4.5 mean
Osteen et al. ⁴⁴	32	Various	-	-	3 median
Aabo et al. ²¹	41	Various	24.4	-	4.5 median
Chan and Woodfurff ⁴⁶	10	Various	40	80	2 median
Annest and Jolly ¹⁷	34	Various	18	44	4.0 mean
Turnbull et al. ¹⁴	89	Abdominal	13	44	4.5 mean

Endoluminal Stents

- Self expanding metallic stent (SEMS)
- Useful in the distal colon
- Could be considered before surgery ('bridge to surgery')
- Mainly considered in patients with unresectable disease
- Technical success rates: 92 – 93.3%
- Alleviation of symptoms: 88%
- Resolution of obstruction in stent 78% versus surgery 98.8%
- 30 day mortality for both 2.3%
- *Frago et al 2014*



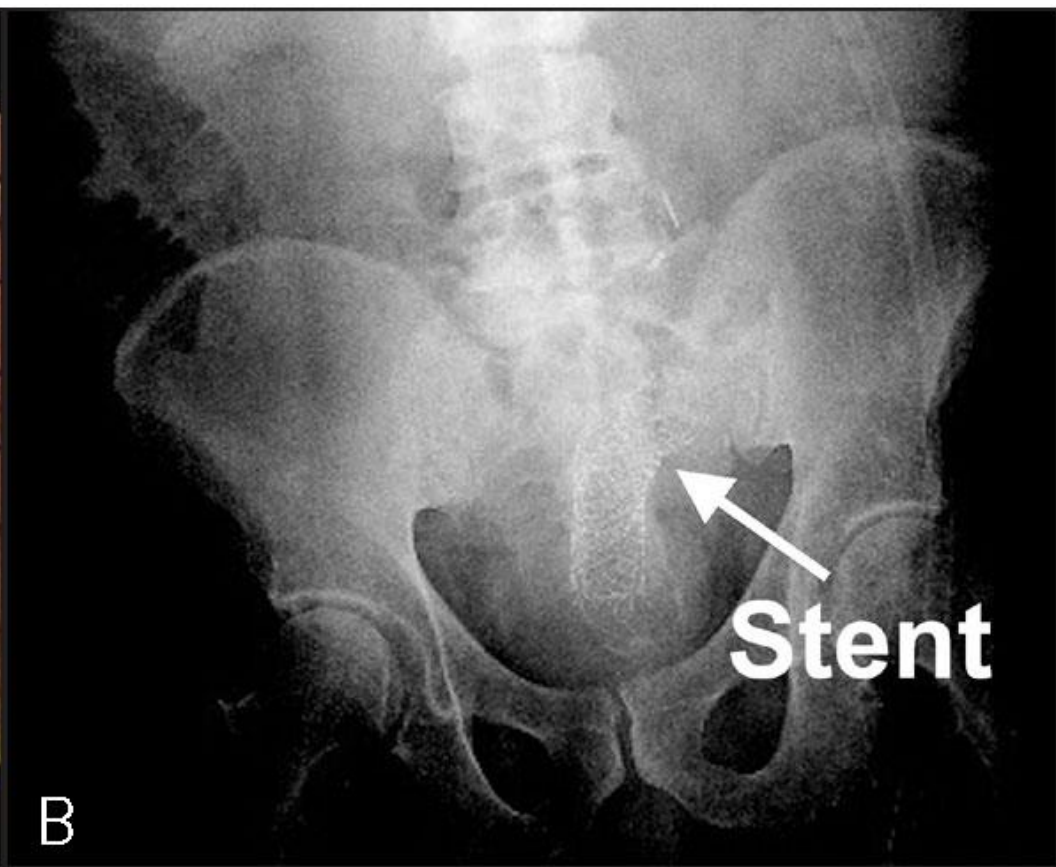
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Endoluminal Stents

- Palliative patients
- Stents are the treatment of choice (*Fiori et al*)
 - Shorter hospital stays
 - Earlier tolerance of oral diet
- Better quality of life: psychological concerns with colostomy (*Xinopoulos et al*)
- Higher risk of longer term complications (*Liang et al 2014*)
- Mean survival rate
 - 16 – 24 months with surgery
 - 4.4-7.6 months with stent
 - *Lee et al*
- Less effective than Sx but shorter time to chemo and lower 30 day mortality (*Xia-Dan et al 2013*)





NASOGASTRIC TUBE

- Decompressing the stomach in upper GIT obstruction
- Acute pre-operative phase of management
- Should not be a reflex action or part of 'protocol'
- **Look at longterm goals of care**

- Management possible with medical measures
- Prolonged nasogastric suctioning and IVT for inoperable patients is not recommended
- **Not well tolerated by many patients**



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MEDICAL MANAGEMENT

- Oral absorption may be impaired
- Choose the subcutaneous route for drugs
- IV is possible if already in place
 - use available IV access e.g.. Hickman
- Rectal route may still be feasible

- S/C bolus or continuous
- S/C can be continued at home



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MS 26 DAILY RATE Syringe Driver

sims GRASEBY



0473

START/BOOST
1 bleep = 0.23 mm



10 bleeps



24^h

TCRCH PALLIATIVE CARE DEPARTMENT 97675000
CONCORD HOSPITAL

PAIN

- Continuous pain
 - Opioid with laxatives
 - Subcutaneous route
- Intestinal Colic
 - Hyoscine butylbromide
 - decrease spasm / colic
 - reduce intestinal secretion
 - reduce amount and frequency of vomiting
 - slows the gut
 - May cause partial to complete obstruction
 - needs review, ?cessation
- Paracetamol
 - ?absorption
 - When oral intake



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NAUSEA AND VOMITING

- Differentiate between nausea and vomiting
- Possible to control nausea quite well
- May need to accept episodes of vomiting
- The aim is to reduce the frequency and amount of vomits



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NAUSEA AND VOMITING

- Maxolon 40 – 100mg / day
 - Beware the high obstruction
- Haloperidol 2-5mg / day
- Cyclizine 25-100mg / day
 - reduces nausea
 - may decrease intestinal secretions
- Levomepromazine 25 -50mg/day
- Cisapride (unavailable in most countries)
 - motility problems with partial bowel obstruction



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DEXAMETHASONE

- NOT FOR PATIENTS CONSIDERED FOR SURGERY
- Reduce peritumoural inflammatory oedema
 - thereby improve intestinal passage
- Role in motility problems
- Useful in nausea and vomiting
- May not prevent tumour progression
- 4-8mg may be used for short periods of time



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H2 antagonists and PPI

- Ranitidine
 - H2 antagonist: inhibiting the stimulatory effects of histamine on volume of gastric secretions
- Proton Pump Inhibitors (omeprazole, pantoprazole)
 - Block (H⁺/K⁺ ATPase)
 - Inhibit histamine, gastrin and acetylcholine



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Reducing gastric secretions:

Support Care Cancer 2009, Clark et al

- 7 studies in peri-operative period
 - Well conducted studies
- Looked at meta analysis of 223 ranitidine, 222 on PPI
- Both PPI and ranitidine reduce gastric volumes
- Most superior agent is ranitidine



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OCTREOTIDE

- Analogue of somatostatin
- Powerful inhibitor on secretion of gastrin, gastric acid, pancreatic juice, bile flow, and intestinal secretions (water, Na, Cl)
- Increase water and electrolyte absorption
- Inhibits gastrointestinal motility (submucosal and myenteric plexus)
- ?direct analgesic effect
- cost effectiveness: very costly
- length of treatment?



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Double-blind, placebo-controlled, randomised trial of octreotide in malignant bowel obstruction

- *D. Currow et al. Journal of Pain and Symptom Management 2015*
- Placebo versus octreotide (600mcg/24hours by infusion)
- Both arms received standardised supportive therapy (infusional ranitidine (200mg/24hours), dexamethasone (8mg/24hours) and parenteral hydration (10-20mls/kg/24hours))
- 87 participants provided data at 72 hours (45 octreotide arm)
- Seventeen people (octreotide) and 14 (placebo) were free of vomiting for 72 hours. ($p = 0.67$).
- Mean days free of vomiting was 1.87 (SD 1.10; octreotide) and 1.69 (SD 1.15; placebo); $p = 0.47$).



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Double-blind, placebo-controlled, randomised trial of octreotide in malignant bowel obstruction

- Reduced number of episodes of vomiting but increased need for hyoscine butylbromide
- Although there was no reduction in the number of days free of vomiting, secondary analyses suggest that further study of somatostatin analogues in this setting is warranted



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INTRAVENOUS FLUIDS

- Under-hydration is better than well hydrated
 - bowel oedema
 - exacerbates intensity and frequency of vomits
- Mouth care is very important
- S/C is not always better than IV
- Intermittent fluids may be wiser
 - assess on daily basis
- Allow to eat and drink as tolerated by patient, not family



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TOTAL PARENTERAL NUTRITION

- ONLY IN PREPARATION FOR SURGERY
- Patients may be set up for further complications from natural disease progression



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PERCUTANEOUS VENTING GASTROSTOMY

- Not a knee jerk response to not eating
- Dependent on tumour biology
 - Is there more anti cancer treatment options?
- Performance status of patients
- Care at home can be difficult
- Ethical considerations
- Many complications that are significant in the face of limited time



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LENGTH OF SURVIVAL WITH MEDICAL MANAGEMENT

- Fainsinger 18.4 days (2-41)
- Baines 3.7 months
- Ventafridda 13.4 days (2-50)
- Ibster 29.2 days



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Terminal Bowel Obstruction

- Control nausea and abdominal pain
- Reduce frequency of vomiting
- Allow to eat and drink
- Avoid naso-gastric tube
- Explanation to patient and family
- Partially dehydrated is better

- Poor prognosis
 - Where care should be
 - Goals and priorities
 - End of life Care



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Questions?



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