



## MANAGEMENT OF MALIGNANT BOWEL OBSTRUCTION PALLIATIVE CARE IN ONCOLOGY 2016

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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

## 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*

## BEWARE!

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

## 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

## 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



## 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

## POOR PROGNOSTIC FACTORS FOR SURGERY

- Intestinal motility / diffuse intraperitoneal carcinomatosis
- Severe cachexia
- Age over 65yr
- Ascites
- Leucocytosis
- Poor nutritional status / low serum albumin
- Previous radiotherapy to abdomen / pelvis
- Poor performance status

## 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

## COMPLICATIONS AND LENGTH OF SURVIVAL AFTER SURGERY

Authors	No. Patients	Primary Cancer	30-Day Mortality (%)	Other Operative Complications (%)	Survival (mo)
Soo et al. <sup>17</sup>	64	Gynaecology	11	15.5	2.5 median
Lund et al. <sup>12</sup>	25	Ovary	32	32	2.0 median
Rubin et al. <sup>14</sup>	43	Ovary	9	11.5	6.8 median
Castaldo et al. <sup>24</sup>	23	Ovary	13	43	17% 1yr
Clarke-Pearson et al. <sup>47</sup>	49	Ovary	14	49	4.5 median
Krebs and Goplerud <sup>48</sup>	98	Ovary	12	12	3.1 median
Tunca et al. <sup>11</sup>	90	Ovary	14	-	7.0 mean
Piver et al. <sup>13</sup>	60	Ovary	16.5	31	2.5 median
Beattie et al. <sup>42</sup>	11	Ovary	9	9	7.0 mean
Walsh and Schofield <sup>7</sup>	36	Various	19	-	11 median
Aranha et al. <sup>45</sup>	40	Various	27.5	22.5	7.0 mean
Aranha et al. <sup>45</sup>	26	Various	46	15.0	4.5 mean
Ostreen et al. <sup>46</sup>	32	Various	-	-	3 median
Aabo et al. <sup>21</sup>	41	Various	24.4	-	4.5 median
Chan and Woodhurst <sup>48</sup>	10	Various	40	80	2 median
Amnest and Jolly <sup>17</sup>	34	Various	18	44	4.0 mean
Turnbull et al. <sup>14</sup>	89	Abdominal	13	44	4.5 mean

PALLIATIVE SURGERY VERSUS MEDICAL MANAGEMENT FOR BOWEL OBSTRUCTION IN OVARIAN CANCER ALI KUCUKMETINI ET AL. EDITORIAL GROUP. COCHRANE Gynaecological Cancer Group, 7 JUL 2010

- Retrospective data for 47 women
- Received either palliative surgery (n = 27) or medical management with Octreotide (n = 20)
- Women with poor performance status were excluded from surgery
- Six (22%) women who received surgery had serious complications of the operation
- Three (11%) died of complications
- Multivariable analysis found that women who received surgery had significantly (p < 0.001) better survival than women who received Octreotide
- Magnitude of this effect was not reported
- Quality of life (QoL) was not reported
- Adverse events were incompletely documented

CURRENT MANAGEMENT OF ACUTE MALIGNANT LARGE BOWEL OBSTRUCTION: A SYSTEMATIC REVIEW FRAGO ET AL 2014 THE AMERICAN JOURNAL OF SX

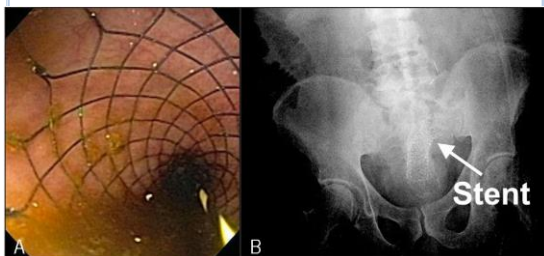
- Proximal obstruction
  - Right hemicolectomy
    - Primary anastomosis between small bowel and colon
    - Anastomotic leak 2.8 -4.6%
- Distal obstruction
  - One stage procedure (few centres with expertise)
  - Previously 3 staged: higher morbidity and mortality
  - More common 2 stage procedure
- Laparoscopic surgery
  - Need a skilled surgeon in this use

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

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

## MEDICAL MANAGEMENT

- Oral absorption may be impaired
- Choose the subcutaneous route for drugs
  - 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



## 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

## 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

## 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
- Do we want to start the bowel again or shut it down?
- Terminal bowel obstruction?

## DEXAMETHASONE

- Cochrane review Feuer et al 2000
  - Trend towards corticosteroids versus placebo
- 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
- May help to re-start bowel function
- NOT FOR PATIENTS CONSIDERED FOR SURGERY

## 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<sup>+</sup>/K<sup>+</sup> ATPase)
  - Inhibit histamine, gastrin and acetylcholine

## REDUCING GASTRIC SECRETIONS:

SUPPORT CARE CANCER 2009, CLARK ET AL

- 7 studies in peri-operative period
  - Well conducted studies
  - Peri-operative period for elective surgery
- Looked at meta analysis
  - Patients: 223 ranitidine, 222 on PPI
- Both PPI and ranitidine reduce gastric volumes
- volume of gastric secretions reduced by an average of 0.22 ml.kg<sup>-1</sup>; 95% confidence interval 0.04 to 0.41
- Most superior agent was ranitidine

## 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?
- Many low powered studies have found octreotide of benefit with less episodes of vomiting and
- Superiority over Hyoscine Butylbromide
- *Mercadante 2007, Ripamonti 2000*

Age	Primary Carcinoma	Days of vomiting before treatment	Dose of octreotide required to control emesis	Number of days on treatment	Response *
83	Colorectal	14	150	23	0
88	Duodenum	10	150	7	0
61	Stomach	35	150	3	0
71	Gallbladder	21	150	9	0
81	Colorectal	6	150	21	0
84	Stomach	3	150	14	0
53	Pancreas	3	200	38	0
68	Ovary	90	200	9	2
77	Colorectal	55	300	3	4
70	Ovary	10	300	1	0
76	Cholangio-carcinoma	17	300	16	0
73	Colorectal	3	300	3	2
66	Ovary	7	300	4	0
76	Ovary	3	300	1	3
72	Colorectal	30	400	3	0
38	Cervix	5	450	7	0
65	Ovary	60	500	7	0
44	Appendix	7	600	11	1
79	Ovary	7	600	8	3
58	Colorectal	2	600	10	0
75	Colorectal	7	600	12	3
76	Pancreas	7	700	3	3
55	Ovary	7	700	15	1
56	Colon	1,200	3	4	

\* WHO disease/toxicity score: Grade 0 - no nausea or vomiting; Grade 1 - nausea; Grade 2 - transient vomiting; Grade 3 - vomiting therapy; Grade 4 - intractable vomiting.

## DOUBLE-BLIND, PLACEBO-CONTROLLED, RANDOMISED TRIAL OF OCTREOTIDE IN MALIGNANT BOWEL OBSTRUCTION. CURROW ET AL *J PAIN AND SYMPT MX 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).

## DOUBLE-BLIND, PLACEBO-CONTROLLED, RANDOMISED TRIAL OF OCTREOTIDE IN MALIGNANT BOWEL OBSTRUCTION CURROW ET AL *J PAIN AND SYMPT MX 2015*

- Reduced number of episodes of vomiting but increased need for hyoscine butylbromide in the octreotide group
- 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

## 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

## TOTAL PARENTERAL NUTRITION

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

## 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
- **Not a useful palliative option in patients with advanced disease**

## LENGTH OF SURVIVAL WITH MEDICAL MANAGEMENT

- |               |                   |
|---------------|-------------------|
| ○ Fainsinger  | 18.4 days ( 2-41) |
| ○ Baines      | 3.7 months        |
| ○ Ventafredda | 13.4 days ( 2-50) |
| ○ Ibster      | 29.2 days         |

## 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
- Avoid IV/Subcut fluids
- Concentrate on symptom control, psychological care and general terminal care
- Care of family and carers

## WHAT IS THE BEST MANAGEMENT FOR THIS MAN?

- Management of symptoms
  - Pain, colic, nausea, bowel care
  - Management of bowel obstruction (standard care?)
- Ask: Is surgery indicated?
  - Elective or emergency
  - Stent possible?
- Management of underlying cancer
  - Are there options?
- Hydration and feeding – what are the choices
- Psychological management

## WHAT CONVERSATIONS DO WE NEED TO HAVE WITH HIM?

- Future bowel obstruction
- Cancer management
- Prognosis
- Terminal bowel obstruction
- Allow to eat and drink?
- Family preparation
  
- Advance care planning and prognosis
- What will end of life care be like

