Case Presentation, Discussion and Sharing of Information on Unresectable Colon Cancer

Jeffy G. Guerra, M.D.
Level IV Surgery Resident
OMMC-Surgery
041707
General Data

63 M
Pandacan, Manila
Chief Complaint

Abdominal pain
History of Present Illness

1 year history of changes in bowel habit
Colonoscopy: Left colonic mass

3 days PTA → abdominal pain
abdominal distention

1 day PTA → inc severity of abdominal pain
becoming generalized
nausea, fever, vomiting
minimal watery stool
Consult
History of Present Illness

plain abdominal x-ray:
  dilated large bowel up to the descending colon
  interserosal thickening
History of Present Illness

Pulmonary infiltrates

pneumoperitoneum
History of Present Illness

Subsequently transferred to OMMC due to financial constraints

admission
Past Medical History

- 2 weeks: on and off productive cough
  whitish phlegm

Personal and Social History

- Smoker 20 pack years
Physical Examination

Conscious, coherent, cachectic
BP 100/70 HR 112
RR 32 T° 38.9°
(+) dry buccal mucosa
Chest & Lungs
tachypneic
symmetrical chest expansion
harsh equal breath sounds
(+ ) bibasal crackles

Heart: Tachycardic, regular rhythm
Abdomen

- distended
- hypoactive to absent bowel sounds
- (+) direct tenderness all over
- (+) muscle guarding
- (+) rigidity

Rectal

- good sphincteric tone, rectal vault collapsed
- (+) mucoid feces on tactating finger
Salient Features

- 63 M
- 1 year hx of changes in bowel habit
- Colonoscopy: Left colonic mass
- (+) 3 day hx abdominal distention and crampy abdominal pain > generalized
- Hypotension, tachycardia, tachypnea
- (+) tenderness all over
- (+) muscle guarding & rigidity
- (+) pneumoperitoneum
- (+) dilated large bowel with interserosal thickening
63 y/o male
(+) hx changes in bm
Colonoscopy: mass left colon

- Abdominal distention
- Crampy abdominal pain (obstruction)

- Increased abdominal pain
- Becoming generalized

- Distended large bowel up to the descending colon

- Tenderness all over (muscle guarding & rigidity)
  - Peritonitis
  - Pneumoperitoneum
  - Interserosal thickening

- Bibasal crackles
- Pulmonic infiltrates

- Hypotension
- Tachycardia
- Tachypnea
- High grade fever
Left colon*

- Tumor 90%
- Diverticular disease 7%
- Volvulus 3%

- obstruction
- perforation
- peritonitis

Cameron, JL. 2001
<table>
<thead>
<tr>
<th>PRIMARY</th>
<th>CONDITION</th>
<th>CERTAINTY</th>
<th>TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Surgical Abdomen sec to Complete intestinal obstruction with tumor perforation</td>
<td>95%</td>
<td>surgical</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SECONDARY</th>
<th>CONDITION</th>
<th>CERTAINTY</th>
<th>TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute surgical abdomen 2ndry to a perforated diverticulitis</td>
<td>5%</td>
<td>surgical</td>
<td></td>
</tr>
</tbody>
</table>
Paraclinical diagnostic procedure

- Do I Need A Paraclinical Diagnostic Procedure?
  
  No.
## Pretreatment Diagnosis

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Acute Surgical Abdomen sec to Complete Intestinal Obstruction with Tumor Perforation</th>
</tr>
</thead>
</table>
Goals of treatment

• Resolve the underlying cause of obstruction, perforation and peritonitis
• Restore bowel continuity
• Least morbidity and mortality
# Management Options

<table>
<thead>
<tr>
<th>Management Option</th>
<th>BENEFIT</th>
<th>RISK</th>
<th>COST</th>
<th>AVAILABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colectomy With Intraoperative Lavage And Anastomosis*</td>
<td>Main goal</td>
<td>Morbidity 14-20% 0.6-11%</td>
<td>Anaesthesia ≈ Leak rate 7%</td>
<td>5,000.00-7,000.00</td>
</tr>
<tr>
<td>Hartmann Procedure and delayed anastomosis*</td>
<td>✓√</td>
<td>2-25% 0.6-17%</td>
<td>Anaesthesia ≈ Leak rate 4-16%</td>
<td>5,000.00-7,000.00</td>
</tr>
<tr>
<td>Colectomy, colostomy, mucous fistula, and delayed anastomosis*</td>
<td>✓√</td>
<td>2-25% 0.6-17%</td>
<td>Anaesthesia ≈ Leak rate 4-16%</td>
<td>5,000.00-7,000.00</td>
</tr>
<tr>
<td>Colostomy*</td>
<td>√</td>
<td>25-48% 31-41%</td>
<td>Anaesthesia ↓</td>
<td>5,000.00</td>
</tr>
</tbody>
</table>

*Murray, JJ et al*
Surgical Treatment of Choice

• Colectomy with intraoperative lavage and Anastomosis
- Give psychosocial support
- Optimize condition of patient
  - Nasogastric tube placed
  - Fluid resuscitation and hydration
  - Pre-op monitoring
  - Antibiotics
  - Screening of other condition that will interfere with treatment
- Prepare materials
Operative Technique

- Patient supine
- Asepsis antisepsis
- Sterile drapes placed
- Midline incision carried down to the peritoneum
- Intraop findings noted
Intraoperative Findings

• (+) generalized peritonitis
• (+) gross fecal spillage
• (+) sigmoid tumor perforation 7 cm from the peritoneal reflection
• Fixed, invades the iliac vessels
• 1.5cm mass, segment 3,5, liver
• (+) regional lymph node
• (+) dilated proximal colon with heavy fecal load
Goals of Treatment

- Bypass obstruction
- Relieve peritonitis and gross fecal spillage
- Decrease fecal load
- Least morbidity and mortality
## Management Options

<table>
<thead>
<tr>
<th></th>
<th>BENEFIT</th>
<th>RISK</th>
<th>COST</th>
<th>AVAILABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Main goal</td>
<td>Morbidity</td>
<td>Mortality</td>
<td>anesthesia</td>
</tr>
<tr>
<td>Transverse loop colostomy</td>
<td>√√</td>
<td>√√</td>
<td>√</td>
<td>anesthesia</td>
</tr>
<tr>
<td>Descending loop colostomy</td>
<td>√√√</td>
<td>√</td>
<td>√</td>
<td>anesthesia</td>
</tr>
</tbody>
</table>
Treatment Plan

• Descending Loop Colostomy, Omental Patch on Tumor Perforation
• Distal colonic wash out
• Peritoneal lavage
• Colostomy with mucous fistula created, descending colon
• Intraoperative colonic lavage done
- Omentum laid over the tumor perforation
- Hemostasis/peritoneal wash
- Instrument and sponge checked
- Layer by layer closure
- Partial skin closure
- Colostomy bag applied
- Wound lightly dressed
Operation

Exploratory Laparotomy,
Descending Loop Colostomy
Omental Patch on Tumor Perforation
Distal Colonic Wash
Final Diagnosis

Intestinal Obstruction with Generalized Peritonitis 2ndry to a perforated Sigmoid carcinoma Stage IV (T4N2M1)
Post-op Care

1st POD  ->  NGT maintained
            Hydration continued
            IV Antibiotics

3rd POD  ->  Catheter removed
            NGT removed
            Diet as tolerated

5th POD  ->  IVF consumed
            Shifted to oral meds
Goals of Treatment

• Increase survival
• Quality of life
## Postoperative Management Options

<table>
<thead>
<tr>
<th>BENEFIT</th>
<th>RISK</th>
<th>COST</th>
<th>AVAILABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean Survival</strong></td>
<td>QOL</td>
<td>Morbidity</td>
<td>Mortality</td>
</tr>
<tr>
<td>With no Surgical Resection (Palliative Care-CX^)</td>
<td>12 months</td>
<td>√√√</td>
<td>reduced risk of death (0.65 hazard ratio)</td>
</tr>
<tr>
<td>Supportive Care^ (RT, Pain mgt, Palliative Surgery)</td>
<td>3-5 months</td>
<td>√√</td>
<td></td>
</tr>
</tbody>
</table>

^ Salcberge, ED et al.
References

References


References

Synchronous Metastatic (Stage IV) Disease

- 20% of CRC patients have metastatic disease at the time of initial presentation.
- The need for surgical intervention in this group of patients is not well defined.
- Clearly, surgical resection or diversion is indicated in patients who present with significant bleeding, perforation, or obstruction.
• In asymptomatic patients with unresectable metastatic disease, the role of surgical resection of the primary lesion remains controversial.

• In patients with resectable metastatic disease (e.g., isolated liver or lung metastases), curative resection may be undertaken.
• retrospective review (Scoogins, et al) with unresectable stage IV CRC, there was no difference in survival between those who were initially managed surgically and those who were initially managed nonoperatively.

• In the surgical group, the morbidity rate was 30% and the mortality 5%. Only 9% of the nonoperative patients subsequently required surgical intervention for bowel obstruction.
• In another retrospective series, patients managed surgically had significantly better overall survival than those managed nonoperatively but had a lesser tumor burden.
• 29% of the nonoperative patients eventually required surgery for bowel obstruction.
Discussion

- Initial complication due to colon carcinoma
  - Left colon: 70%
  - Bowel obstruction: 8-21% of patients
  - Perforation: 10%
Discussion

• Series of 735 patients
  free perforation  27
  tumor perforation  20
  perforation proximal to obstruction  7

• Reflects indolent course of large bowel obstruction from neoplasms
Discussion

• **Perforation**
  - most lethal complication of colorectal carcinoma
  - 4 fold operative mortality
  - 5 year survival ¼ that of the overall population

• **Poor prognosis**
  - function of the more advanced stage of the disease sequelae from the complicated manifestations
Considering patients surviving curative resections penetrating and obstructing lesions assoc. with 5-year survival the same as curative resection group as a whole perforating lesions roughly half the life expectancy

• 323 patients
• outcome of resection and primary anastomosis vs Hartmann’s procedure
• Stratified: localized peritonitis
  generalized peritonitis
  or with obstruction

- **Resection anastomosis** 176 (55.7%)
  - anastomotic dehiscence 9 (5.1%)
  - wound sepsis 8 (4.5%)
  - median hospital stay 13 days
  - mortality rate (5.7%)

- **Hartmann's resection**
  - systemic morbidity (39.5%)
  - surgical morbidity (24.3%)
  - mortality rate (20.4%)

- RA performed with low M&M in selected patients even in the presence of free perforation with diffuse peritonitis
- Px selected for staged resection: major co-morbid disease
TNM CLASSIFICATION

- Primary Tumor (T)
  TX  primary tumor cannot be assessed
  T0  no evidence of primary tumor
  Tis carcinoma in situ: intraepithelial or invasion of lamina propria
  T1  tumor invades submucosa
  T2  tumor invades muscularis propria
  T3  tumor invades through the muscularis propria into the subserosa or into nonperitonealized or perirectal tissues
  T4  tumor directly invades other organs or structures and/or perforates visceral peritoneum
TNM CLASSIFICATION

• Regional lymph nodes (N)

Nx  regional lymph nodes cannot be assessed
N0  no regional lymph node metastasis
N1  metastasis in 1 to 3 regional lymph nodes
N2  metastasis in 4 or more regional lymph nodes
TNM CLASSIFICATION

- Distant metastasis (M)
  - Mx  Distant metastasis cannot be assessed
  - M0  no distant metastasis
  - M1  distant metastasis
<table>
<thead>
<tr>
<th>AJCC/UICC</th>
<th>Dukes</th>
<th>5 year survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 0</td>
<td>Tis</td>
<td>N0</td>
</tr>
<tr>
<td>Stage I</td>
<td>T1</td>
<td>N0</td>
</tr>
<tr>
<td></td>
<td>T2</td>
<td>N0</td>
</tr>
<tr>
<td>Stage II</td>
<td>T3</td>
<td>N0</td>
</tr>
<tr>
<td></td>
<td>T4</td>
<td>N0</td>
</tr>
<tr>
<td>Stage III</td>
<td>Any T</td>
<td>N1</td>
</tr>
<tr>
<td></td>
<td>Any T</td>
<td>N2</td>
</tr>
<tr>
<td>Stage IV</td>
<td>Any T</td>
<td>Any N</td>
</tr>
</tbody>
</table>
Factors with negative prognostic influence:
- poor histologic differentiation
- mucin producing tumors
- signet ring cell tumors
- venous or perineural invasion by cancer
- bowel perforation
- elevated CEA level
- aneuploid nuclei
• Adjuvant chemotherapy treatment with 5FU + low dose leucovorin
  5% significant prolongation DFS
  4% in overall survival

MCQ/MCR
1. The following factors have a poor prognostic influence in the survival of patients with colonic carcinoma, except:
   a. venous or perineural invasion by cancer
   b. bowel perforation
   c. depressed CEA level
   d. aneuploid nuclei
   e. poor histologic differentiation

2. The 5 year survival rate of Stage III colonic carcinoma is
   a. <5%
   b. 10%
   c. 20-50%
   d. 60-80%
   e. 90%
3. The following is/are treatment option/s for left colonic obstruction
   1. Segmental colectomy, intraop lavage, anastomosis
   2. Hartmann’s procedure with delayed anastomosis
   3. Colectomy, colostomy, mucous fistula with delayed anastomosis
   4. Subtotal Colectomy
4. Which surveillance guidelines is/are recommended by ASCO after curative resection for colonic carcinoma:
1. chest x-ray annually
2. history and physical examination 3-6 months first 3 years then annually
3. liver ultrasound every year
4. Colonoscopy, 3-5 years
5. The following statements is/are true regarding stage IV Colorectal Cancers.

1. 20% of CRC patients have metastatic disease at the time of initial presentation.
2. The need for surgical intervention in this group of patients is not well defined.
3. Clearly, surgical resection or diversion is indicated in patients who present with significant bleeding, perforation, or obstruction.
4. In patients with resectable metastatic disease (e.g., isolated liver or lung metastases), curative resection should not be undertaken.
Thank you for your kind attention!