A 71 year-old man with watery diarrhoea: What’s around the corner?

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71 year-old man

- 4 days history of vague abdominal pain and watery diarrhoea (approximately 15 bowel movements every day)

- No recent travel or unusual food exposure and contacts

- Radical prostactemy 15 days prior

- No other particular medical history
ON EXAMINATION

- TC: 38°C, dehydrated

- BP: 120/70 mmHg, HR 90 bpm, eupnoic, SpO₂ 97% while breathing room air

- Abdominal tenderness, no guarding or rebound tenderness, no masses, normal bowel sounds

- The remainder of the physical examination was unremarkable
<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>REFERENCE RANGE, ADULTS</th>
<th>ON PRESENTATION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>WHITE BLOOD CELL COUNT (x 10⁹ /L)</td>
<td>4.0-9.6 x 10⁹</td>
<td>22.11 x 10⁹</td>
<td>High</td>
</tr>
<tr>
<td>NEUTROPHILS-SEGMENTED</td>
<td>0.5-0.7</td>
<td>0.83</td>
<td>High</td>
</tr>
<tr>
<td>LYMPHOCYTES</td>
<td>0.22-0.4</td>
<td>0.03</td>
<td>Low</td>
</tr>
<tr>
<td>RED BLOOD CELL COUNT (x 10¹²/L)</td>
<td>3.9-5.6 x 10¹²</td>
<td>3.95 x 10¹²</td>
<td></td>
</tr>
<tr>
<td>HAEMOGLOBIN (g/L)</td>
<td>115-164</td>
<td>113</td>
<td></td>
</tr>
<tr>
<td>HAEMATOCRIT</td>
<td>0.36-0.50</td>
<td>0.33</td>
<td></td>
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<tr>
<td>PLATELET COUNT (x 10⁹ /L)</td>
<td>150-450 x 10⁹</td>
<td>511 x 10⁹</td>
<td>High</td>
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<tr>
<td>CREATININE (µmol/L)</td>
<td>62-115</td>
<td>124</td>
<td>High</td>
</tr>
<tr>
<td>UREA NITROGEN (mmol/L)</td>
<td>6-17.8</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>GFR (ml/s/m²)</td>
<td>1.25-2.09</td>
<td>0.73</td>
<td>Low</td>
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<tr>
<td>C-REACTIVE PROTEIN (nmol/L)</td>
<td>0-0.48</td>
<td>20.10</td>
<td>High</td>
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<tr>
<td>SODIUM (mmol/l)</td>
<td>136-145</td>
<td>134</td>
<td></td>
</tr>
<tr>
<td>POTASSIUM (mmol/l)</td>
<td>3.5-5.1</td>
<td>3.6</td>
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PANEL: DIFFERENTIAL DIAGNOSIS
Stool testing for Clostridium difficile antigen and toxin A and B resulted POSITIVE
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**PANEL:**
WHAT WOULD YOU DO?
STRINGENT FLUID MANAGEMENT

ORAL VANCOMYCIN 125 mg qid

IV METRONIDAZOLE 500 mg tid

IV TIGECYCLINE 50 mg bid

ADMISSION TO THE INFECTIOUS DISEASES UNIT
AFTER 24 HRS

After an initial improvement, patient clinically deteriorated

Hypotension

Worsening diarrhoea

Oliguria

Reduced glomerular filtration rate

Increased serum lactate (8.4 mmol/l)

Substantial increase in the hematocrit: from 30.4 to 41.1
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Comments from the panel?
\[
\text{Extravasation of fluids} \\
[(\text{Current hematocrit } - \text{ baseline hematocrit}) / \text{ baseline hematocrit}] \\
\times \frac{1}{3} \text{ of the body weight (kg)}
\]

\[
\left[\frac{41.1 - 30.4}{30.4}\right] \times 23.33 = 8.2 \text{ liters}
\]
CT-SCAN, 24 HOURS LATER
CT-SCAN, 24 HOURS LATER
WHAT WOULD YOU DO?
Colectomy should be performed to treat CDI in any of the following situations:

- Perforation of the colon

- Systemic inflammatory and deteriorating clinical condition not responding to antibiotic therapy; this includes the clinical diagnosis of toxic megacolon and severe ileus.
Understanding the risk factors for mortality following colectomy for complicated CDI can help identify which patients may benefit from early surgical intervention.

- Vasopressor requirement
- Altered mental status
- Lactate > 5 mmol/l
- Hemodynamic instability
- Renal failure
- Need for mechanical ventilation
- Hypoalbuminemia
- Leukocytosis > 50000/mmc
URGENT TOTAL COLECTOMY WITH ILEOSTOMY

ADMISSION TO ICU
24 hours later:
- Clinically improved
- Decrease of total leukocyte count
- Increase in urine output
24 hours later:
- Clinically improved
- Decrease of total leukocyte count
- Increase in urine output

5 days later:
- Malaise
- Hypotension
- Lactic acidosis
- Sinus bradycardia
- Raised inflammatory markers
CT-SCAN, 5 DAYS LATER
CT-SCAN, 5 DAYS LATER
Comments from panel?
Suppurative thrombophlebitis of the portal mesenteric venous system

Associated with abdominal sepsis

Rare

High mortality

Bacteroides spp., E.coli, Klebsiella spp.
Comments from panel?
Treatment with meropenem and caspofungin was added to tigecycline and metronidazole, and anticoagulation with low molecular weight heparin was administered.

Antibiotic treatment was continued for 3 weeks.

He was discharged after 4 weeks of hospitalization.

September 2016: colon recanalization after Hartmann’s procedure.
During the management of CDI, it is mandatory to consider the possibility of rare complications (e.g. pylephlebitis).

Mortality rates of emergency surgery in CDI is high, ranging from 19% to 71%, and deciding when to intervene in medically managed patients is extremely difficult.

Usefulness of the hematocrit to calculate the extravasation of fluids, as a marker of ischemic or necrotic bowel.
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