Abdominal pain and diarrhoea – chronic disease in a young woman

Time/Place  Thursday, 23rd February 2006
           10am-12pm
           Room 210, Wallace Wurth Building

Facilitator  Michael Grimm

Goals  To use a case of chronic inflammatory bowel disease to highlight
       anatomical, pathophysiological, clinical and psychological issues in
       the presentation, progress and management of a chronic disease in a
       young female.

       To use students’ own clinical experiences and clinical skills gained
       during the week and the week’s teaching sessions to explore these
       issues.

Abstract  Difficult to manage Crohn’s disease in a young woman with issues of
          poor compliance, poor understanding, poor response to treatment,
          extra-intestinal manifestations of disease and finally severe relapse
          in pregnancy.

Readings  Chronic disease in a young woman

          2005;71:54-61

          Lichtenstein GR et al. Crohn’s is not a 6-week disease.
          Lifelong management of mild to moderate Crohn’s disease. Inflamm
          Bowel Dis 2004;10:S2-S10

Preparation  Read the case and the associated readings thoroughly before the
              case method tutorial and come prepared to discuss your perceptions
              and reflections. Consider the following questions:

              1. Why did Suzanne Baker’s initial presentation get confused with
                 appendicitis?
              2. What mechanisms might explain Suzanne’s diarrhoea and
                 continuing abdominal pain at various points in her illness?
              3. A variety of anti-inflammatory medications have been used to
                 treat Suzanne’s disease. How do they work?
              4. Why did Suzanne stop all treatment when she became
                 pregnant?
              5. How should Dr Drake have approached the issue of smoking?
              6. What will happen to Suzanne’s disease in coming years?
Chronic disease in a young woman

Case HM3-6

Background
Suzanne Baker is a 35 year old who runs a business with her husband. She has a PhD in marine biology and worked for some years in several universities in Australia and the United States. She is known to have had Crohn’s disease for eight years, has been looked after by numerous gastroenterologists because of her frequent work-related moves and has a healthy scepticism of the role of conventional therapies in management of her condition. She has required several significant treatment changes because of her condition over recent years. She has a 12 month old son, Joshua, who is healthy and well.

Suzanne moved to Sydney 18 months ago following a period as a researcher at the Australian National University in Canberra. She was referred by her Canberra gastroenterologist to Dr Drake in Sydney, with a comment in the referral letter about her being “strong willed” and exhibiting “poor compliance”.

Presenting Complaint
Suzanne presents to Dr Drake’s rooms with a three week history of recurrent episodes of abdominal pain associated with diarrhoea. She has developed severe pain and swelling around both ankles and knees.

History of Presenting Illness
Three weeks ago, Suzanne noted the onset of central abdominal pain following meals. The pain was colicky and occurred about two hours after eating. It lasted for two to three hours and was relieved using codeine as an analgesic. There was associated onset of diarrhoea, increasing in frequency up to eight times daily. The stools were watery, moderate in volume, contained blood and occurred night and day. Both the pain and the diarrhoea were lessened by fasting, but overall the symptoms were worsening. In addition, Suzanne was aware of multiple painful mouth ulcers. There’d been no recent travel or use of antibiotics, nor contact with diarrhoeal illnesses. The symptoms were similar to several previous exacerbations of her Crohn’s disease.

Over the preceding week, pain and then swelling had developed around both ankles, and then knees. The pain was severe on waking and associated with stiffness that lasted for several hours before lessening. Walking had become extremely difficult. There was no fever or skin rash, and no history of similar episodes.
Crohn’s disease history
Eight years ago Suzanne presented with several days of progressive right iliac fossa pain. This was associated with fever, vomiting and signs including dehydration and rebound tenderness in the RIF. An appendicectomy was planned but at laparotomy, changes typical of Crohn’s disease were found in the terminal ileum and caecum, with severe ileal inflammation, narrowing and fat wrapping. A limited resection of the terminal ileum and proximal colon was performed and a primary ileo-colonic anastamosis carried out. Pathology demonstrated changes “consistent with Crohn’s disease”, including at the resection margin. Suzanne left hospital on no treatment, with follow-up organised with the surgeon.

Over the next twelve months, she had several recurrent episodes of right iliac fossa pain and the surgeon felt a RIF mass. She was treated with prednisone, 40mg daily, which on each occasion was rapidly tapered over 4 weeks to zero, as symptoms resolved.

Over the next five years, Suzanne moved city several times, including to the USA for a 12 month period, as her postdoctoral research career took her to new locations. On each occasion no new specialist care was organised, and only when recurrent abdominal pain developed, and over the last two years of this period, the onset of moderately severe diarrhoea and mouth ulcers, was she referred to gastroenterologists. Several courses of prednisone were used and trials of mesalazine, azathioprine and 6-mercaptopurine attempted, but Suzanne found that these tablets made her nauseated and she stopped them. Colonoscopies had been performed, which demonstrated ulceration in the right colon and at the anastamosis, and narrowing and ulceration in the neo-terminal ileum. Prednisone was used constantly at a dose between 10 and 15mg daily to control symptoms.

On moving to Canberra just over two years ago, Suzanne sought immediate referral to a gastroenterologist. At this point, she had intermittent colicky abdominal pain and diarrhoea several times daily. She had lost 6kg in weight (down to 62kg) over the preceding two months. She had reduced her own prednisone dose to 5mg daily and was using a number of medications from a naturopath, which she felt had improved her symptoms. The gastroenterologist organised another colonoscopy, which showed active, deep, linear ulcers in several regions of the colon, and severe inflammation and narrowing of the ileo-colonic anastamosis, which would not allow the colonoscope to pass. She was advised to stop alternative therapies, prednisone was increased again to 40mg daily, and azathioprine again commenced at a dose of 100mg daily. Initial nausea settled on continuation of the azathioprine but diarrhoea and abdominal pain returned on reduction of the prednisone dose below 15mg daily. At subsequent visits to her gastroenterologist, Suzanne reported that she frequently forgot to take her azathioprine and that she had recommenced a number of alternative medications.

Suzanne is referred to Dr Drake
A further move of city was planned as Suzanne met and married a Sydney businessman. Her Canberra gastroenterologist referred her to Dr Drake in Sydney,
with a thick wad of letters, past investigations and X rays. Her first appointment with Dr Drake was just over 18 months prior to the current presentation.

Dr Drake confirmed the history of her Crohn’s disease. Suzanne had occasional episodes of food-related colicky abdominal pain and diarrhoea up to 6 times daily, with no blood visible. Her weight was stable between 62 and 65kg. She denied fevers and recent mouth ulcers, and described no history of perianal disease, joint disease, liver disease or eye disease. There was no family history of Crohn’s disease. Suzanne smoked between 5 and 10 cigarettes daily and had since she was a teenager. She was taking prednisone 5mg daily, mesalazine 500mg twice daily and azathioprine 100mg daily.

**General Examination**

Suzanne appeared well, her weight was 63kg and BP 115/70. She was afebrile.

**Gastrointestinal Examination**

There were no signs of chronic liver disease, jaundice or mouth ulcers. The abdomen was soft but there was a tender, 5cm mass in the right iliac fossa. There was no perianal disease.

**Musculoskeletal Examination**


**Cardiovascular / Respiratory / Neurological Examinations**

No abnormalities were detected

Several blood tests were performed:

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full blood count</td>
<td>Hb 109g/L (N &gt; 115)</td>
</tr>
<tr>
<td></td>
<td>MCV 75 (N 80-100)</td>
</tr>
<tr>
<td></td>
<td>WBC 5.4 x 10^9/L</td>
</tr>
<tr>
<td></td>
<td>Platelets 250 x 10^9/L</td>
</tr>
<tr>
<td>Liver function tests</td>
<td>ALP 145 (N &lt; 120)</td>
</tr>
<tr>
<td></td>
<td>GGT 105 (N &lt; 40)</td>
</tr>
<tr>
<td></td>
<td>AST, ALT, bilirubin,</td>
</tr>
<tr>
<td></td>
<td>albumin normal</td>
</tr>
<tr>
<td>Fe studies</td>
<td>Transferrin saturation</td>
</tr>
<tr>
<td></td>
<td>12% (N 30-45)</td>
</tr>
<tr>
<td></td>
<td>Ferritin 12 (N &gt; 20)</td>
</tr>
<tr>
<td>Inflammatory markers</td>
<td>ESR 35 (N &lt; 15)</td>
</tr>
<tr>
<td></td>
<td>CRP 18 (N &lt; 3)</td>
</tr>
</tbody>
</table>

Dr Drake elected to maintain the current prednisone dose but increased the azathioprine dose to 125mg daily. He made strong comments on Suzanne’s need to stop smoking.

**Progress**

Over subsequent months, Suzanne’s symptoms slowly improved. Abdominal pain settled, diarrhoea lessened to twice daily and her general well-being was as good as it had been for several years. The right iliac fossa mass resolved. Prednisone was weaned and ceased. She continued to smoke.
At a routine follow-up visit, Suzanne mentioned to Dr Drake that she was eight weeks pregnant. She was very well, but wanted to stop her medications, which were azathioprine 125mg daily and mesalazine 500mg twice daily, based on an article she had read on the internet. Dr Drake indicated that the risks to her pregnancy of recurrent Crohn’s disease almost certainly outweighed the risk from her medications, and that his advice was to leave the medications at their current doses. He suggested an obstetrician with expertise in pregnancy in inflammatory bowel disease patients, and asked Suzanne to return for follow-up in 3 weeks.

Dr Drake next heard from Suzanne two months later, when she made an urgent appointment. She had ceased all medications soon after learning she was pregnant. In the preceding three weeks she had redeveloped recurrent, colicky central abdominal pain after eating, right iliac fossa pain, large volume diarrhoea up to 12 times daily with blood mixed with stool. In addition she had developed severe mouth ulcers. Pain and then swelling had developed around both ankles, and then knees. The pain was severe on waking and associated with stiffness that lasted for several hours before lessening.

Dr Drake felt that she had suffered a relapse of her Crohn’s disease, associated with extraintestinal manifestations. Blood tests were performed:

<table>
<thead>
<tr>
<th>Full blood count (FBC)</th>
<th>Hb 92g/L (Normal &gt;115)</th>
<th>Liver function tests</th>
<th>ALP 160 (N &lt; 120)</th>
<th>GGT 80 (N &lt; 40)</th>
<th>AST, ALT, bilirubin, albumin normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>WCC 12.5 x 10^9/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Platelets 467 x 10^9/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(150-400)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRP</td>
<td>215 (&lt;3)</td>
<td>Stool examination x2</td>
<td></td>
<td></td>
<td>Abundant WBCs and RBCs No pathogens</td>
</tr>
</tbody>
</table>

One week of high doses prednisone, 60mg daily, failed to change the symptoms. A colonoscopy was performed:

- Severe, deep ulceration in transverse colon
- Nodular ulceration and narrowing of ileum
Progress after initial assessment
Suzanne was admitted to hospital, fasted, given IV fluids and commenced on high doses intravenous steroids.

Summary and Issues