Disturbing diarrhoea (answers on page 34)

Thomas, at 75 years old, has had a reasonably healthy life. A retired general practitioner, his medical history included a very early (stage 1) caecal cancer detected fortuitously from a routine faecal screen test ten years before. He has had no bowel-related symptoms since his successful proximal hemicolectomy. Routine screening found that he has chronic kidney failure, his estimated glomerular filtration rate (eGFR) varying from 44 to 49 over the last five years. He is up twice a night to urinate. An ex-smoker, he has regularly taken short courses of ciprofloxacin for a repeated chesty cough: he takes omeprazole with it to prevent antibiotic induced 'indigestion'.

Five days after one of these chesty episodes, self-treated as usual with ciprofloxacin, he suddenly started to have severe diarrhoea, one Saturday lunchtime. Not wanting to bother his doctor at the weekend, he put himself on watery fluids only, hoping that would see him until Monday. However, he deteriorated very quickly, starting to vomit bile-stained material around two hours after the first bout of diarrhoea. By the evening his wife overruled his wishes to stay at home and drove him to the hospital, where the staff found him to have a temperature of 39 deg Celsius, a blood pressure of 90/40 mm Hg, a heart rate of 200 beats per minute, and to be severely dehydrated. His abdomen was swollen and tender, and the diarrhoea had stopped, but he was still retching up green vomit.

Part one

Q1 What are your first thoughts about Thomas's differential diagnoses?

- **a) Top of the list must be food poisoning.**
- **b) This seems too severe to be a viral infection such as norovirus.**
- **c) The diarrhoea stopping is a sign that he is already beginning to recover so that identifying the causal agent is probably irrelevant.**
- **d) Thomas is exceptionally ill and could die without emergency treatment.**
- **e) Clostridium difficile infection is very unlikely because the illness started at home.**

Part two

Q 2 Abdominal ultrasound examination showed loops of distended bowel: his white cell count was 19,000 cells/ml and serum creatinine level 0.18 mmol/L. C-reactive protein level was over 200. What are your further thoughts?

- **a) He has paralytic ileus and renal failure.**
- **b) The most likely diagnosis is now clostridium difficile associated disease.**
- **c) You should continue with the ciprofloxacin and add metronidazole.**
- **d) Clostridium is still not probable.**
- **e) He may have a small bowel obstruction caused by a loop around an adhesion from the hemicolectomy.**
- **f) He should be prepared for immediate surgery to relieve the ileus.**

Part three

Q 3 Thomas was admitted to an isolation room and was started on intravenous fluids. A nasogastric catheter was inserted to drain the stomach contents, which proved to be almost 100% bile. What are your next steps in his management?

- **a) Stop ciprofloxacin immediately.**
- **b) Start rectal vancomycin and intravenous metronidazole.**
- **c) Monitor renal function daily.**
- **d) Monitor blood pressure and heart rate.**
- **e) Maintain strict fluid balance to avoid dehydration and oedema from over hydration.**
- **f) Explorative surgery.**

Part four

Q 4 What is the likely prognosis in Thomas's case?

- **a) Resolution of fever and diarrhoea within 4 days.**
- **b) With surgical intervention he should recover quickly.**
- **c) He needs close follow up and regular stool testing to prevent recurrences.**
- **d) Recurrence is unlikely, at about 15% of cases that started at home.**
- **e) Even with the best care there is a mortality of nearly 40%**

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