Atypical Presentation of Clostridium Difficille Infection (CDI).

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Abstract

A 77 years old lady presented with a few days history of nausea. She was treated recently with oral antibiotics for urinary tract infection (UTI) both in the community and as an inpatient. Her infection markers continued to rise despite being on appropriate antibiotics for UTI(according to culture & sensitivity). She had a thorough workup however no source of infection was identified. Though she didn't have any diarrhoea, a stool sample was taken which came back positive for Clostridium Difficile infection (CDI). She was treated for CDI and showed significant improvement symptomatically and biochemically.

Introduction

Clostridium difficile infection (CDI) is one of the most important causes of morbidity, mortality and prolonged hospital stay. It is usually identified by presence of diarrhoea and confirmed with a positive stool sample. It is documented in literature that CDI may present without diarrhoea or even with constipation; however being an uncommon mode of presentation and with lack of frequent reporting, it is not suspected until a patient develops diarrhoea. This is especially important when a patient is on opioids for various reasons hence not presenting with typical symptoms.

Case Report(s)

A 77 years old lady presented with a few days history of nausea and lower abdominal discomfort. She was treated in community by her GP for a recurrent urinary tract infection(UTI) however had to attend hospital for un-resolving symptoms & poor oral intake. She had a background of pulmonary sarcoidosis which was treated with low dose steroids, iron deficiency anaemia, type II diabetes, hypothyroidism, chronic back pain due to spinal stenosis for which she used codeine plus low dose morphine. On initial presentation her routine observations(blood pressure, pulse & temp) and systemic examination were unremarkable. Initial work up showed elevated inflammatory markers (Illustration 1) and a positive urine dipstick for neutrophils. Chest and abdominal x-rays(Illustration 2) were unremarkable. She was started on empirical oral antibiotics for a UTI pending culture results and intravenous fluids. after 3 days course of antibiotics(Trimethoprim) her symptoms did not improve. A different antibiotic(co-amoxiclav) was subsequently introduced according to urine culture sensitivities. In view of her non specific symptoms, raised inflammatory markers and iron deficiency anaemia, a CT abdomen was done which revealed diverticular disease along with mild colitis(Illustration 3). Upper GI endoscopy (OGD) was performed in view of ongoing nausea which was also unremarkable. Her white cell count continued to increase along with C reactive protein (CRP). A stool sample was taken which returned positive for clostridium difficile. She was commenced on oral vancomycin according to local hospital guidelines and other antibiotic & Omperazole was stopped. Her symptoms improved quickly and inflammatory markers also showed a declining trend.

Discussion

According to “Society of healthcare and Epidemiology of America” and “Infectious Diseases society of America” a case definition of CDI should include the presence of symptoms usually diarrhoea (defined as passage of three or more unformed stools in 24 hours or fewer consecutive hours) and either when the right colon or caecum is involved or when there is paralytic ileus but usually presents with severe abdominal pain and fever. Patients with typical manifestations of CDI (eg, diarrhoea, abdominal pain, nausea and vomiting) and a positive diagnostic assay should receive antibiotics for treatment for C. difficile. Oral Vancomycin is used in non severe disease in a dose of 125 mg-500mg four times daily. Oral vancomycin is not absorbed systemically and achieves predictably high levels in the colon Oral or IV metronidazole can also be used for initial treatment of non severe CDI. This case was important being an atypical presentation of CDI and a high index of suspicion was required for the diagnosis in the absence of diarrhoea and typical abdominal pain.
Investigations

1. White cell count 20.2 with predominant neutrophilia CRP 210 on admission.
2. Initial Urine C&S (Culture & sensitivity) E-coli sensitive to Trimethoprim & co-amoxiclav.
3. Stool Culture positive for clostridium difficile and GDH (Glutamate dehydrogenase)
4. CT abdomen: Diverticular disease & possible collitis.
5. Upper GI endoscopy (OGD): Unremarkable.

Outcome

Patient showed symptomatic improvement. Her nausea settled and inflammatory markers also showed a downward trend (Illustration 1). She is currently awaiting discharge for non medical issues.

Learning points

1. CDI is usually associated with diarrhoea however it can present without diarrhoea and even constipation.
2. In the case of an unexplained rise in inflammatory markers with a history of recent antibiotic use, CDI should always be among the differentials.
3. Treatment of CDI is selected according to severity criteria.
4. Empirical use of antibiotics should be avoided as much as possible and sensitivities determined beforehand.

References

Illustrations

Illustration 1

Trend of WBC count

![Trend of WBC count](image)

Illustration 2

Abdominal X-ray

![Abdominal X-ray](image)
Illustration 3

CT Abdomen