

## PSEUDOMEMBRANOUS COLITIS DUE TO CLOSTRIDIUM DIFFICILE

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**Key-word:** Colitis, pseudomembranous

**Background:** A 25-year-old man was treated with ampicillin for acute tooth inflammation. After five days, he presented to the emergency department with intermittent abdominal pain especially at the right lower and left upper quadrant, bloody diarrhea, fever and nausea. Physical examination revealed diffuse abdominal tenderness, especially at right lower quadrant and right flank, but no peritoneal signs. Laboratory studies showed an elevated white blood cell count and metabolic acidosis.

Plain radiography of the abdomen was obtained, followed by emergency abdominal contrast-enhanced CT for further evaluation.

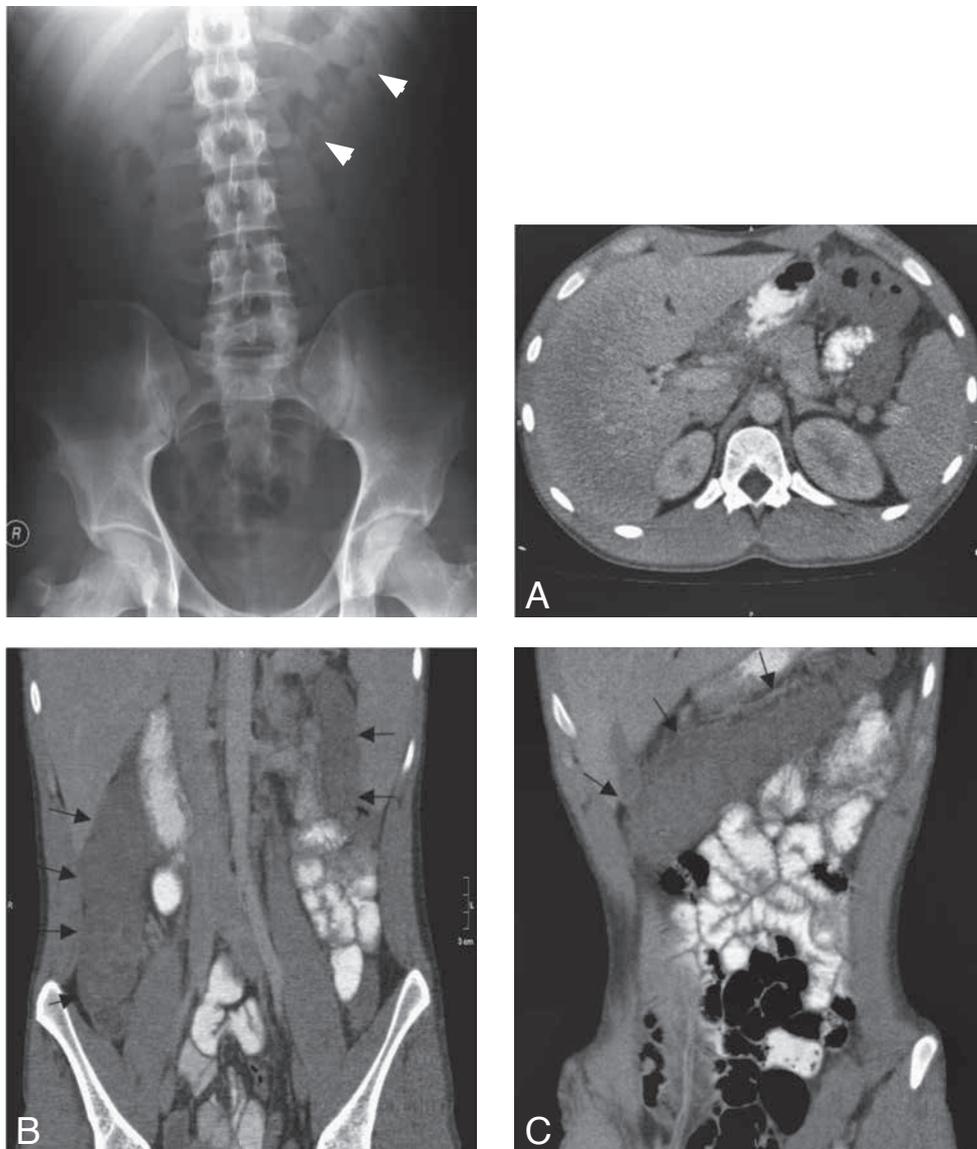


Fig. 

1	2A
2B	2C

## Work-up

On AP plain radiography of the abdomen (Fig. 1), large bowel dilatation without air fluid levels and diffuse nodular thickening with haustral 'thumb-printing', especially in left upper quadrant is seen.

Contrast-enhanced CT scan of the abdomen includes an axial section at the level of the upper abdomen (A), a reformatted image in the coronal plane posteriorly in the abdomen, at the level of the ascending and descending colon (B), and a reformatted image in the coronal plane more anteriorly in the abdomen, at the level of the transverse colon (C). The CT images reveal marked mural and haustral thickening, as well as a hypodense aspect of the entire colon indicating pancolitis (arrows). The images also show stripes of contrast trapped between nodular and thickened haustra, called 'accordion sign' in literature.

## Radiological diagnosis

The clinical history and imaging findings are suggestive for *pseudomembranous colitis*. The patient was treated with oral vancomycin and exhibited rapid improvement.

## Discussion

Pseudomembranous colitis (PMC) is an acute infection caused by toxins produced by an unopposed proliferation of *Clostridium difficile* bacteria in the colon. *C. difficile* infection is responsible for virtually all cases of PMC and for up to 20% of cases of antibiotic-associated diarrhea without colitis.

The clinical features of PMC include diarrhea, abdominal tenderness, fever, dehydration, and

leukocytosis. Occasionally, patients with *C. difficile* colitis present with or progress to fulminant, life-threatening colitis. The diagnosis of PMC depends on the demonstration of *C. difficile* toxins in the stool or of characteristic adherent yellow plaques 2–10 mm in diameter at proctosigmoidoscopy or colonoscopy.

The treatment of PMC consists of oral administration of metronidazole or vancomycin. However, in patients with a fulminant and toxic form of PMC who fail to respond to medical therapy, surgical intervention can be lifesaving.

It is important for radiologists to be aware of mortality in this life-threatening condition and its imaging characteristics because they may be the first to suggest the diagnosis. If not treated aggressively, pseudomembranous colitis can result in significant morbidity and mortality. The radiologic diagnosis of pseudomembranous colitis is important because the lack of aggressive treatment may lead to increased morbidity.

## Bibliography

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