***CLOSTRIDIUM DIFFICILE* INFECTION-ASSOCIATED REACTIVE ARTHRITIS MIMICKING SEPTIC ARTHRITIS OF THE KNEE**

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Background

Clostridium difficile is an uncommon cause of reactive arthritis (ReA) in children. We herein present a rare case of *C. difficile* infection-associated ReA (CDIAReA) in a 10-year-old child, who developed severe diarrhea and a knee effusion following a course of oral antibiotic treatment.

Case Presentation Summary

A 10-year-old boy was admitted to our hospital with a 3-day history of painful swelling in the left knee. Two weeks earlier he had completed a 7-day course of oral cefpodoxime. Five days after the discontinuation of antibiotic treatment, he developed watery diarrhea. On admission, the patient had fever up to 39°C. Physical

examination revealed a warm, swollen, and tender left knee with decreased range of movement. Laboratory tests revealed a high leucocytosis (22,400/mm³) with 84% neutrophils. The erythrocyte sedimentation rate was 56 mm/h and C-reactive protein was 18 mg/dL. Magnetic resonance imaging of the left knee showed a large amount of joint effusion (Figure 1). After diagnostic arthrocentesis, empiric treatment with intravenous cefazolin was initiated for the presumptive diagnosis of septic arthritis. However, his fever and joint symptoms persisted. Gram stain and culture of synovial fluid were found to be negative. He continued to have large amounts of watery diarrhea in the hospital. Stool culture was negative, but *C. difficile* toxin B was detected by RT-PCR (Xpert; Cepheid, Sunnyvale, CA). On hospital day 4, oral

metronidazole (30 mg/kg/day) was substituted for cefazolin and continued for 10 days. Within 10 days his diarrhea and joint symptoms resolved.

Learning Points/Discussion

Our report emphasizes that CDIAReA should be suspected in a child who develops an acute, painful arthritis in the setting of postantibiotic diarrhea.

FIGURE 1. Axial (a) and coronal (b) plane fat-sat T2-weighted MR images of the left knee demonstrate the large amount of joint effusion (white arrows).