Gastrointestinal CMV: An Unusual Presentation

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Abstract

Cytomegalovirus (CMV) is the commonest opportunistic infection in humans and can also be acquired perinatally from genital secretions or postnatally from breast milk(1,2). Typical presentations of the infection range from asymptomatic disease to complex syndromes such as exanthema johnstoneum, dermatitis herpetiformis or mucocutaneous(1,2). Gastrointestinal CMV infections are rare in immunocompetent hosts, but are well described in those with human immunodeficiency virus(2). Here we describe a case of CMV colitis associated with colonic strictures and secondary obstruction in an otherwise healthy infant.

Introduction

Cytomegalovirus infection causes a wide described complex of signs and symptoms that include microcytosis, unexplained hearing loss, rash, hepatosplenomegaly, and intracranial calcifications(2). Given the prevalence of CMV virus and the severity of complications to the outcomes, some authors advocate that every newborn be screened for CMV infection(3). With few reports are we also to highlight the light described gastrointestinal affects of CMV which are uncommon but can be severe. Our case involves an infant with colonic stricture, CMV related cases of NEC, ileal atresia, protein losing enteropathy and even imperforate anus have been described(3-5).

Case Report

An almost 3 month old male infant reported to the ER for fever, diarrhea, and irritability for four days duration. In those four days he had been seen by another ER and his PCP, who had treated him for colitis, and had grown two doses of ceftriaxone. He then came to our facility with continued symptoms, and was referred to the Pediatric Gastroenterology.

The infant had been born at term via uncomplicated vaginal delivery. He was born in Kovai and the family had returned to the United States a week prior to presentation. His mother denied any STIs, and her CS was status was unknown. She did remember having someone come to their apartment a week ago who had a strong smell, dirt consisted of only beer milk and he had not yet had two month of age.

On admission, his body temperature was 99.4°F (37.4°C), heart rate of 154 beat/minute, respiratory rate of 58 breaths/minute and his blood pressure 79/51 mmHg. He was fuzzy but consolable and his physical exam, including abdominal exam, was otherwise normal. Informed lab studies revealed a white blood cell count of 37,193/mm3 with 45% neutrophils, 35% lymphocytes, 5% monocytes and 2% eosinophils. His hemoglobin was 7.6 g/dL and he was thrombocytopenic with a platelet count of 48,900/mm3. A basic electrolyte panel was within normal limits and an initial electrolyte panel was normal. Intravenous PCP was negative.

On day 2 of admission he was febrile and developed abdominal distention. He was renotated on rectal examination and a abdominal radiograph was obtained that showed a large distended loop of bowel concerning for obstruction. At that time the patient's response was conserved, and rectal irrigation was performed. A nasogastric tube was placed for decompression. The infant was reevaluated later that day and he was found to have worsening distension. He was taken for urgent upper endoscopy which revealed a stricture at the junction of the descending and sigmoid colon. He was then taken to the operating room for exploratory laparotomy.

Conclusions/Discussion

CMV is a common infection in all host with gastrointestinal effects commonly being seen in the immunocompromised infants and children(1,2). CMV infection in immunocompetent infants is being increasingly described and found in the developing world(6). Though described as first reported in 1979(7). It's involvement in bowel strictures leading to obstruction has been well described(2,8) and have also been described in full term infants(8,9). There have been other cases described of previously healthy children developing protein losing enteropathy and self-limiting gastropathy (Meniere's disease) associated with new CMV infection(8,10). It is widely documented gastrointestinal CMV infections, most patients described had good outcomes when treated with IV ganciclovir (4,5).

The age of presentation of the patient we described was concerning for congenital CMV infection. Though he displayed no well described signs or symptoms of congenital CMV we could not be completely certain that he had not acquired the infection postnatally as well. It is described that infants can acquire CMV infection postnatally from breast milk as CMV has been cultured from breast milk 15-30% of mothers(11). This may be a vector for an infection of our patient, but cultures of his mother's breast milk will need to be done.

Since CMV is not usually considered in infants with NEC, it is possible that the layers seen are those we describe here are important in highlighting the possibility of an involvement in acute necrotizing enterocolitis in infants without a history of NEC, or in infants with diarrhea that is not resolving.(9)

References


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