an acute disorder within the abdomen. However, the asymptomatic form has been described following a surgical procedure, trauma, percutaneous cholangiography and liver biopsy, and spontaneous rupture of the extrahepatic biliary tree in infants and children. In addition to being the first report of biliary ascites due to spontaneous rupture of the gallbladder wall, this case is a poignant reminder that it is necessary to demand appropriate confirmation of the diagnosis of extrapulmonary tuberculosis. The case also calls attention to the experience of using a dipstick to assess the presence of bilirubin in ascitic fluid while awaiting confirmatory biochemical analysis. Because biliary ascites can clinically and biochemically simulate infectious peritonitis, it should be considered in the differential diagnosis of newly acquired progressive ascites, with or without fever.

**Summary**

The combination of fever, weight loss, painless ascites and a positive tuberculin skin test suggested the diagnosis of peritoneal tuberculosis in a 60-year-old man with a history of alcoholism. Clinical and laboratory studies were consistent with the diagnosis but results of peritoneal biopsies were inconclusive. An exploratory laparotomy was therefore carried out and surprisingly showed an occult perforation of the gallbladder wall, resulting in asymptomatic biliary ascites. The case points to the need to definitively diagnose the cause of ascites before initiating therapy.

**REFERENCES**


**Campylobacter Colitis**

**A Cause of Chronic Diarrhea in Children**

**MELVIN B. HEYMAN, MD, MPH**

**San Francisco**

**VICTORIA I. PATERO, MD**

**MARVIN E. AMENT, MD**

**Los Angeles**

**INFECTION BY Campylobacter jejuni** has been described as a gastroenteritis with pathologic involvement of the jejunum and ileum, that spares the colon. In the past two years, however, several cases of adult patients with acute Campylobacter colitis have been reported. Campylobacter colitis has not been previously reported in children.

A 7-month-old girl with chronic diarrhea producing blood-streaked feces and a 13-year-old girl with crampy abdominal pain and bloody diarrhea are reported to document the existence of chronic Campylobacter colitis in infants and children and its response to treatment.

**Reports of Cases**

**CASE 1**. A 7-month-old female infant was seen with a two-month history of diarrhea. Her stool frequency had increased from the usual one to two yellowish green formed stools to six to eight watery stools per day.

A week after the onset of diarrhea, the feces contained bright red blood with mucus. Cultures of stool specimens were negative for *Salmonella* and *Shigella* and a leukocyte count showed a leukocytosis. The patient responded to a milk protein-free formula, Pregestimil (Mead Johnson Nutritional Division, Evansville, Indiana), and the diarrhea and blood in the feces ceased. Ten days later, her fecal output increased and became

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*This has recently been upgraded from *Campylobacter fetus* subspecies *jejuni* to a separate species.*

From the Department of Pediatrics, UCLA School of Medicine. Dr. Heyman is now affiliated with the Department of Pediatrics, Gastroenterology Unit, University of California, San Francisco.

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Reprint requests to: Marvin E. Ament, MD, Department of Pediatrics, UCLA School of Medicine, MDCC 22-340, Los Angeles, CA 90024.
CASE REPORTS

bloody for the second time. Treatment with half-strength soybean formula for a month as an outpatient, followed by peripheral vein total parenteral nutrition as an inpatient, was unsuccessful in stopping the blood-streaked diarrhea. Eight weeks into her illness she had her first fever and was transferred to UCLA Hospital, Los Angeles.

Her height was 70.5 cm (75th percentile) and weight was 7.32 kg (40th percentile). The findings on physical examination were normal. Laboratory studies showed the following values: serum sodium 142 mEq per liter, serum chloride 106 mEq per liter, serum bicarbonate 16.4 mEq per liter (normal 23 to 29), serum aspartate aminotransferase (AST, formerly SGOT) 41 IU per liter (normal 6 to 36), serum alanine aminotransferase (ALT, formerly SGPT) 11 IU per liter (normal 10 to 45), serum protein 6.6 grams per dl and serum albumin 4.1 grams per dl. Analysis of urine was normal. Hemoglobin was 11.2 grams per dl, hematocrit 33.6 percent; leukocyte count was 10,500 per cu mm, with 10 percent segmented neutrophils, 2 percent band forms, 74 percent lymphocytes and 8 percent monocytes; platelet count was 490,000 per cu mm. Admission stool specimen examination showed five leukocytes and erythrocytes per high-powered field; all stool specimens had a normal pH of 6.5 and were read as negative with Clinitest and Hematest (Ames Company, Inc.). Proctosigmoidoscopic examination showed punctate ulcerative lesions extending the entire 10 cm examined; however, areas of normal vascular pattern were seen adjacent to spontaneously friable mucosa. Rectal valves were edematous. Rectal suction biopsy specimens showed acute and chronic colitis. Cultures of a stool specimen from the proctosigmoidoscopic examination grew C jejuni and were negative for other enteric pathogens. She was treated with administration of erythromycin ethylsuccinate, 50 mg per kg of body weight per day for ten days. The stool frequency decreased to one a day, and the stool specimens became free of erythrocytes and polymorphonuclear leukocytes. Culture of a stool specimen was repeated a week after completing a course of antibiotic medications and did not grow Campylobacter.

CASE 2. A 13½-year-old girl had crampy lower abdominal pain for a week and a half. Three days after the onset of the cramps, she had three red, mucoid stools. The cramping episodes occurred four to five times a day. The maximum temperature recorded was 38°C (100.5°F). Administration of Donnatal (hyoscyamine sulfate, atropine sulfate, scopolamine hydrobromide and phenobarbital) and Hycodan (hydrocodone bitartrate and homatropine methylbromide) did not relieve her symptoms. With each episode of cramps, she had a bowel movement of a small amount of diarrheal feces that, on microscopic examination of a specimen, showed sheets of polymorphonuclear leukocytes. She was admitted to UCLA Hospital because of the severity of cramps, weight loss of 3 kg and persistence of diarrhea.

Height was 146 cm (below the fifth percentile) and weight was 30.5 kg (below the fifth percentile). The patient had a flat abdomen with increase in bowel sounds and diffuse abdominal tenderness with guarding. The results of the rectal examination were normal and the remainder of her physical examination elicited no abnormalities. Significant laboratory findings included a leukocyte count of 7,700 per cu mm with 64 percent segmented neutrophils, 28 percent band forms and 8 percent monocytes. Proctosigmoidoscopic examination showed spontaneous friability of the rectal mucosa to 18 cm, with a general loss of vascular pattern. A stool specimen taken during this examination grew C jejuni. Her condition gradually improved in the third week of her illness without antibiotic therapy, and pain ceased in the fourth week. Repeat culture of a stool specimen was negative for the organism.

Discussion

Infection caused by C jejuni has been typically described as an acute gastroenteritis presenting with symptoms of fever, abdominal pain and diarrhea, often with bright red blood. Infants and children who have a history of diarrhea of longer than 14 days ("chronic diarrhea") and colitis should still be considered to have an infectious diarrhea until cultures of stool specimens are reported negative for Campylobacter, Shigella, Salmonella and Yersinia.

The diarrhea associated with proved Campylobacter gastroenteritis usually lasts from one day to three weeks, though reports suggesting chronic infection exist. Three cases of prolonged diarrhea have been reported associated with isolation from blood culture of "Vibrio-like" organisms, now reclassified as Campylobacter organisms. Wheeler and Borchers reported the cases of two siblings, an 11-month-old infant and a 4-year-old child, with nine-month histories of four to five episodes of diarrhea. Culture of a blood
specimen from the infant grew *Vibrio* and the sibling had a positive hemagglutination titer to the same *Vibrio*. Both responded to treatment with streptomycin sulfate. Another case of "related *Vibrio*" cultured from a blood specimen was reported by Cadranel and co-workers in a 16-month-old child who had recurrent diarrhea for five months.

The absence of malabsorption in our cases implies limited or absent mucosal damage to the small bowel, wherein this organism has been cultured in previous reports.

Ulcerative colitis or Crohn's disease should only be diagnosed after the presence of enteric pathogens and parasites is ruled out, typical histologic evidence is obtained or classical findings of ulcerative colitis or Crohn's disease are seen in barium enema studies. The findings of leukocytes and blood in the feces, colitis with inflamed friable mucosa on sigmoidoscopic examination, and inflammatory reaction with crypt abscesses and mucus depletion on histologic examination of rectal biopsy specimens are similar to that of adult cases of *Campylobacter* colitis. One 14-year-old pediatric patient with similar pathologic findings has been described who had a barium enema study showing pancolitis; symptoms resolved after treatment with erythromycin. As suggested previously, a first attack of "ulcerative colitis" that does not later recur may in some cases actually be an infectious disease caused by *C. jejuni*.

Erythromycin proved to be an effective antimicrobial agent and is considered one of the drugs of choice for treatment of *Campylobacter* infections. Relapses have not been reported to occur after treatment with this medication. Other antibiotics with high activity against *C. jejuni* include gentamicin, chloramphenicol, furazolidone and the tetracyclines.

In summary, two cases of chronic colitis caused by *C. jejuni* are presented. Physicians caring for children should consider *Campylobacter* enterocolitis in the differential diagnosis in infants with chronic diarrhea, especially if gross blood is present in the feces. A sigmoidoscopic examination would be helpful in obtaining stool specimens for isolation of pathogenic organisms and for evaluating a patient with bloody diarrhea. However, a fresh stool specimen is adequate for the diagnosis of *C. jejuni*, if cultured appropriately.

REFERENCES

Transient Bifascicular Block Following Blunt Chest Trauma

KENNETH W. CARR, MD
ALLEN D. JOHNSON, MD
GABRIEL GREGORATOS, MD
San Diego

ALTHOUGH CONDUCTION DEFECTS caused by blunt chest trauma are probably not rare, well-documented cases have been reported infrequently. Dolara and Pozzi in 1966 reviewed 23 cases of trauma-related atrioventricular (AV) block reported between 1912 and 1938. Only a few met most or all of the following criteria: youthful age, absence of preexisting heart disease, great magnitude of injuring force, repolarization changes on electrocardiograms suggestive of associated myo-

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