

Acute Diverticulitis in a 19 yr. Old Native American Male

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Citation

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Abstract

Diverticulosis, most commonly described as a disease Afflicting elderly patients, is believed to be a consequence of prolonged Increased intracolonic luminal pressure with mucosal herniations occurring at Arterial branch points. Recent reports indicate an increasing incidence of Diverticular disease in younger patients accustomed to a westernized diet. The native american population has traditionally been relatively free of Diverticular disease, however, this subgroup may be experiencing a shift in Disease onset based upon dietary influences. Presented is a case of acute Diverticulitis of the sigmoid colon in a nineteen year old native american Male.

CASE REPORT

An obese, nineteen year old, Native American male (BMI 43.1kg/m²) presented with a one day history of crampy abdominal pain, diarrhea, and a temperature of 38.3(C. Physical exam revealed voluntary guarding of bilateral lower quadrants. The patient was diagnosed with gastroenteritis and treated conservatively with clear liquids, antacids, and Tylenol (r) with codiene. Three days later, he returned with colicky abdominal pain localized to the left lower quadrant, and a temperature of 38.6(C. A fullness of the left lower quadrant was noted with an associated psoas sign and a guaiac negative rectal exam. Laboratory studies were significant for a leukocytosis of 19,000. Standard radiographs of the abdomen were non-specific. He was admitted with a presumptive diagnosis of diverticulitis. Aggressive fluid resuscitation, broad spectrum antibiotics, and bowel rest with peripheral parental nutrition were initiated.

Computerized tomography of the abdomen and pelvis exhibited inflammatory changes of the sigmoid colon with an associated phlegmon [See Figures 1 & 2]. Resolution of the patient's symptoms occurred after one week. Nonetheless, his white blood cell count rose to 20,400. Barium enema revealed narrowing of the sigmoid colon, a single diverticulum, and extravasation of contrast [See Figure 3].

Figure 1

Figure 1 & 2: Computerized tomography of the abdomen and pelvis with inflammatory changes of the sigmoid colon



Figure 2



Figure 3

Figure 3: Barium enema revealing a narrowing of the sigmoid colon with a single diverticulum



The patient was taken to the operating theater for an exploratory laparotomy. Upon opening the peritoneum, a large quantity of purulent fluid and a nine centimeter segment of necrotic sigmoid colon was discovered. A sigmoid colectomy, end-colostomy, Hartmann's procedure, and an incidental appendectomy were performed. The

patient was discharged on post operative day six and his recovery has been unremarkable to date.

DISCUSSION

Diverticulitis is classically diagnosed clinically with fever, acute abdominal pain possibly with fullness localized to the left lower quadrant, and leukocytosis as demonstrated by our young native male. Definitive studies include computerized tomography, barium enema, and colonoscopy. Abdominal tomography is helpful in the initial evaluation to delineate potential areas of inflammation, abscesses, or associated abdominal pathology. With failure of conservative therapy, barium enema can be utilized to confirm the diagnosis. If symptoms resolve yet rectal bleeding persists, colonoscopy is considered mandatory to rule out carcinoma. Treatment varies depending upon presentation. Conservative therapy with broad spectrum antibiotics is often successful in treating mild exacerbations and can be initiated upon initial presentation as done for our patient. Operative intervention is indicated for those patients who present with signs of peritonitis, hemorrhage, or fail medical therapy.

Of those patients presenting with diverticular disease, 2.5% are reported to occur in the population younger than age 40.^{1,2} In this age group, diverticulitis is initially misdiagnosed in up to 70% of cases.³ The disease may act with greater virulence in the young and is associated with a higher incidence of morbidity and mortality.^{4,5,6,7,8} Those under fifty years of age are also more likely to fail conservative management.⁹

Epidemiologists have long considered diets low in fiber as a possible etiologic factor in the development of diverticular disease.^{10,11} In patients younger than forty, obesity and gender may also be contributing factors with men more frequently afflicted than women (2:1).^{12,13} The role of ethnicity has been debated. However, in the southwestern United States, obese Hispanic males represent the majority of those treated for diverticulitis under the age of forty. The incidence of this disease in the Native American population has yet to be characterized and may deserve further investigation.

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