Acute Diverticulitis in a 19 yr. Old Native American Male

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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 guiaic 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.

References

1. Freischlag J, Bennion RS, Thompson JE. Complications of diverticular disease of the colon in young people. Dis Col Rect. 1986;29:639-43.
2. Acosta JA, Grebenc Ml, Doberneck RC, McCarthy JD, Fry DE. Colonic diverticular disease in patients 40 years old or younger. The Am Surg. 1992;58:606-9.
3. Simonowitz D, Payloyan D. Diverticular disease of the colon in patients under forty years of age. Am J

Gastroenterol. 1977;67:69-72.
4. Eusebio EB, Eisenburg MM. Natural history of diverticular disease of the colon in young patients. Am J Surg. 1973;125:308-11.
5. Chodak GW, Rangel DM, Passero E. Colonic divertivticulitis in patients under age 40: need for earlier diagnosis. Am J Surg 1981;141:699-702.
6. Spivak H, et al. Acute colonic diverticulitis in the young. Dis Col Rect. 1997;40:570-4.
7. Vignati PV, et al. Long-Term management of diverticulitis in young patients. Dis Col Rect. 1995;38:627-9.
8. Rodkey G, Welch C. Changing patterns in the surgical treatment of diverticular disease. Ann Surg. 1984;200:466-78.
9. Ambrosetti R, et al. Acute left colonic diverticulitis: A prospective analysis of 226 consecutive cases. Surgery 1994;115:546-50.
10. Vanderpool DM. Dietary fiber: its role in preventing gastrointestinal disease. South Med Jour. 1986;79:1201-4.
11. Mendeloff AI. Thoughts on the epidemiology of diverticular disease. Clinics Gastroenterology 1986;15:855.
12. Schauer PR, Ramos R, Ghiatas AA, Sirinek KR. Virulent diverticular disease in young obese men. Am J Surg. 1992;164:443-6.
13. Konvolinka CW. Acute diverticulitis in patients under age forty. Am J Surg, 1994:167;6:562-5

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