Pericarditis as the Initial Manifestation of Inflammatory Bowel Disease*

Bassam J. Sarrouj, M.D.; Dominick J. Zampino, D.O.; and Ana M. Cilursu, M.D.

Pericarditis is an uncommon extraintestinal manifestation of inflammatory bowel disease. Clinical presenta-

tions range from asymptomatic pericardial effusions to cardiac tamponade. Our patient with ulcerative colitis presented with acute pericarditis that provided an opportunity to review the literature on cardiac involvement in inflammatory bowel disease.

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IBD-inflammatory bowel disease

Key words: corticosteroids; inflammatory bowel disease; olsalazine sodium; pericarditis

A 37-year-old woman was admitted to the hospital in September 1992 with a 2-week history of pleuritic, subternal chest pain, fever, palpitations, and migratory arthritis in elbows, ankles, knees, and wrists. She also complained of a sore throat and dry cough. History revealed recurrent episodes of arthralgias/arthritis and ulcerative skin lesions that resolved either spontaneously or with anti-inflammatory medications. She denied dyspnea, weight loss, abdominal pain or altered bowel habits, tick exposure, or recent travel, pleurisy, or renal problems.

CASE REPORT

On examination there was a two-component pericardial rub without murmurs or gallop. Lungs were clear and the abdomen was benign. No oral ulcerations, pharyngeal exudates, or peripheral edema were noted. Mild tenderness could be elicited in both elbows and ankles without significant synovitis. A chest radiograph showed cardiomegaly and small bilateral pleural effusions; electrocardiogram was nonspecific, and echocardiography confirmed the presence of a moderate pericardial effusion without valvular disease.

Laboratory test results included a leukocyte count of 9.8×10^9/L, differential count of 0.15 polymorphonuclear leukocytes, 0.6 bands, 0.14 lymphocytes, and 0.09 eosinophils, platelet count of 474×10^9, hemoglobin of 95 g/L, and hematocrit of 0.284. Sedimentation rate (Westergren) was 78 mm/h, reticulocyte count was 0.025, antinuclear antibody was 1:80 homogeneous pattern with negative anti-double-stranded DNA, anti-SSA, and anti-SSB antibodies. Cryoglobulins were not detected. Results of quantitative immunoglobulin analysis was normal. Blood and throat cultures were negative.

She was treated with indomethacin, 25 mg for three doses, without response, then given intravenous methylprednisolone, 40 mg every 8 h for 4 days, followed by oral aspirin. A repeated echocardiogram 4 days after hospital admission showed improvement in the pericardial effusion. On the fifth hospital day, she developed watery diarrhea and several purple nodules on her lower extremities that developed into lesions consistent with pyoderma gangrenosum. Clostridium difficile toxin titer and stool cultures were negative. Flexible sigmoidoscopy revealed moderately severe ulcerative colitis involving the rectum, sigmoid, and descending colon. Skin and bowel biopsy specimens confirmed the pyoderma gangrenosum and ulcerative colitis.

She was treated with intravenous hydrocortisone, 100 mg every 8 h, and olsalazine sodium, 500 mg three times daily. There was significant improvement in the skin lesions and resolution of the diarrhea. Repeated echocardiogram on the day of hospital discharge showed complete resolution of the pericardial effusion.

To date, neither colitis or pericarditis has recurred; the patient takes prednisone, 10 mg daily, and olsalazine sodium, 750 mg three times daily.

REFERENCES


*From the Department of Medicine, Atlantic City (NJ) Medical Center.
Reprint requests: Dr. Cilursu, Medical Education, 1925 Pacific Avenue, Attn. Harry Knorr, Atlantic City, NJ 08401
Table 1—Pericarditis as the Initial Manifestation of Inflammatory Bowel Disease

<table>
<thead>
<tr>
<th>Reference No.</th>
<th>Diagnosis</th>
<th>Onset of Intestinal Symptoms</th>
<th>Extraintestinal Involvement</th>
<th>Recurrence of Pericarditis</th>
<th>Type of Cardiac Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Ulcerative colitis</td>
<td>3 wk prior</td>
<td>None</td>
<td>No</td>
<td>Asymptomatic pericardial effusion</td>
</tr>
<tr>
<td>10</td>
<td>Ulcerative colitis</td>
<td>2 yr later</td>
<td>Erythema nodosum</td>
<td>Yes</td>
<td>Pericarditis</td>
</tr>
<tr>
<td>16</td>
<td>Ulcerative colitis</td>
<td>2 wk prior</td>
<td>None</td>
<td>Yes</td>
<td>Asymptomatic pericarditis</td>
</tr>
<tr>
<td>17</td>
<td>Ulcerative colitis</td>
<td>Simultaneous</td>
<td>Pericholangitis</td>
<td>Yes</td>
<td>Pericarditis</td>
</tr>
</tbody>
</table>

**DISCUSSION**

Although the extracolonic manifestations of inflammatory bowel disease (IBD) have been well described, involvement of cardiac structures is an uncommon complication. Pericardial involvement during the course of IBD was first reported in 1967. Since then, various reports of pericardial involvement have been published, ranging from asymptomatic pericardial effusions to frank pericardial tamponade. In addition, myocarditis and conduction system defects have also been associated with IBD.

Most published reports describe cardiac involvement during an active phase of previously diagnosed IBD, sometimes years after initial intestinal symptoms. Most cases are associated with ulcerative colitis, although Crohn's disease has also been described in IBD-related pericarditis. One case of pericardial tamponade occurred after total colectomy, although the rectal stump had been preserved. Under these circumstances, the cause of the pericardial involvement is more evident. However, when the cardiac symptoms are the initial manifestation (Table 1), then it is important to consider IBD in the differential diagnosis of pericarditis. The presence of other extraintestinal manifestations or concomitant pleural effusions may also provide important diagnostic clues. Recurrent pericarditis has developed both during active flares of IBD and when the intestinal disease has been quiescent.

Although aspirin and other nonsteroidal anti-inflammatory agents have been used to treat uncomplicated pericarditis in the setting of quiescent IBD, the literature reviewed herein supports the use of corticosteroids for pericarditis whether or not the IBD is active. Prompt resolution of the pericardial symptoms is the rule, unless direct pericardial drainage is warranted.

**CONCLUSION**

Pericardial involvement is an uncommon extraintestinal manifestation of IBD. Pericarditis may occur independently of other extraintestinal manifestations, and may recur despite quiescence of the IBD. It should be considered in the differential diagnosis of every patient with IBD who develops chest pain. In addition, occult IBD should be excluded when investigating any patient with pericarditis of obscure origin.

**REFERENCES**


Pericarditis in Inflammatory Bowel Disease (Sarrouj, Zampino, Ciursu)