Original Article

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ARTHRITIS IN PATIENTS WITH CROHN'S DISEASE: OUR EXPERIENCE

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Summary

Arthritis can occur in association with inflammatory bowel disease (Crohn's disease and Ulcerative Colitis). It usually affects a large lower extremity joint and often occurs when the bowel disease is flaring. Arthritis and Crohn's disease together may be a cause of distress in the sufferer. Sometimes the arthritis manifestations are the first symptoms that appear and they bring the patient to clinical controls. The authors describe their study effected on 45 patient affections by disease of Crohn that has presented arthritic manifestations.

Keywords: Spondylitis; sacroiliitis; inflammatory bowel diseases.

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Introduction

Crohn's disease (CD) is an inflammatory disease of the digestive system which may affect any part of the gastrointestinal tract from mouth to anus. Most commonly, the inflammation occurs in the small intestine and in the colon with stable disease location over the years. Rectal sparing is a typical but not constant feature of CD. Furthermore, CD is discontinuous, with skip areas interspersed between one or more involved areas.

The pathogenesis of both disease phenotypes is complex, the likely primary defect lies in the innate rather than adaptive immunity, particularly in the chemical antimicrobial barrier of the mucosa (1).

The symptoms of CD can be gastrointestinal and/or systemic. Disease of joints is the most common extraintestinal complication, affecting an estimated 25% of all IBD patients (2). Some people with inflammatory bowel disease have a type of arthritis that is similar to rheumatoid arthritis in some ways. However, there are some important differences. With the arthritis associated with IBD, inflammation tends to involve only a few, large joints and it tends not to involve both sides of the body equally. For example, it might affect the knee on one side and the ankle on the other. In rheumatoid arthritis, more joints, especially small ones in the hand and wrist are involved and joints on both sides of the body are affected equally. An antibody (Rheumatoid Factor) commonly found in the blood of people with rheumatoid arthritis usually is not found in the blood of people with IBD arthritis. Unlike rheumatoid arthritis, arthritis

associated with IBD may affect the lower spine, especially the sacroiliac joints, and is associated with a certain gene, called HLA-B27(3).
Arthritis associated with CD may be divided in three clinical categories: sacroiliitis, spondylitis, peripheral arthritis. Radiographic sacroiliitis is seen in about 12% while spondylitis occurs in about 5% of patients with IBD (4). The peripheral arthritis tends to be asymmetrical, often migratory nature running more or less parallel with the IBD and should not be confused with rheumatoid arthritis (5). In spinal arthritis symptoms include pain and stiffness in the joints of the spinal column that is at its worst in the morning, but will improve with physical activity. Spinal arthritis can lead to fusion of the bones of the vertebral column. This permanent complication can lead to a decrease in range of motion in the back and a limitation of rib motion that impairs the ability to take deep breaths.
Symptoms of peripheral arthritis are pain, swelling, and stiffness in one or more joints of the arms and legs (wrists, knees, and ankles) that may migrate between joints. When pain in peripheral arthritis is untreated it can last from several days to weeks. Fortunately, this type of arthritis does not generally cause any permanent damage.

Materials and methods
Forty-Five patients with a confirmed Crohn's disease are observed at University of Palermo during two year between March 2006 and July 2008. 28 patients was women and the mean age was 34.8 years (range 17-69). Diagnosis of CD was made according to accepted clinical, endoscopic, radiological, and histological criteria, or was confirmed at surgery, in agreement with criteria described by Schachter and Kirsner (6). Every patients are analyzed with clinical exams, laboratory data, radiographies . In addition, all patients were screened for the presence of the antigen HLA B27. X-rays studies were made using a standard technique. The radiographic results of sacroiliitis were graded according to Bennett and Burch (7) as 0=normal joint, 1=suspicious sacroiliitis 2=abnormal joint with sclerosis and/or erosions, 3=unequivocally abnormal with erosions, sclerosis, widening or narrowing or partly ankylosed, 4=total ankylosis. The result of a latex fixation test rheumatoid factor (RF) was recorded in patients with joint symptom. Arthritis was defined as joint pain associated with tenderness and swelling; the pain on joint motion was elicited during the examination. Patients were subdivided into two groups: patients with colitis and without colitis. The patients with arthritis were classified into the categories used by Gravallese and Kantrowitz for IBD: peripheral arthritis, spondylitis, sacroiliitis (8).

Results
It was found that of Forty-Five patients with CD 8 patients (17,7 %) had arthritis**.** Arthritis not occurred in patients without colitis. Predominant symptoms are abdominal pain and weight loss; sporadically diarrhoea and haematochezia. It was observed only one Skin disorder: a case of Erythema nodosum (incidence of 1,53%)
The mean age of patients with arthritis was 32 and mean disease duration of pain and limitation symptom was 30 months. In nine patients, arthritis appeared after the onset of bowel symptoms with mean duration of 24 months in CD; in three patients (6,6%), arthritis preceded the onset of bowel symptoms some months before. The arthritis was seronegative (negative RF). One patients with sacroiliitis showed HLA-b-27 positivity. Of the 8 patients with arthritis, Peripheral arthritis was found in 7 patients (87.5%). Articular involvement tended to be monoarticular or pauciarticular, but two patients had polyarticular involvement. The most frequently involved joint was the Knee joint (4 patients), followed by the ankle (3 patients), elbow (2 patients), wrist (2 patients), proximal interphalangeal (2 patients), shoulder (1 patients), hip (1 patient). Spondylitis was diagnosed in 1 patients (12,2%) with inflammatory back pain. Sacroiliac joint abnormality was observed in 1 patients with peripheral arthritis (12,2%) with radiologic sacroiliitis grade 3.

Discussion
CD have long been recognized to cause both intestinal and extraintestinal complications. The symptoms and the activity of the disease can come and go. Even though many effective medications are available to control the activity of the disease. A patients with CD is a patients that can present many symptoms and many clinical manifestation, which often are the first

signal of illness. The CD are gastroenterology illness not only, but also surgical and orthopaedics because often extra-intestinal manifestations are painful and causing limitations in activities.
Most series of patients with Crohn's disease have estimated the frequency of joint involvement to 2-16% (9,10). In the present study, the overall incidence of arthritis in Crohn disease was 17,7%.
Scarpa et al, however, showed a strong reverse relationship between the affected joint number and the extent of colitis (11) and suggested that the extent of the intestinal lesion in ulcerative colitis seems to be important in the expression of the articular complications. In the seven patients with peripheral arthritis associated with CD, pancolitis was involved in five and rectosigmoid in two. There was no difference in the incidence of arthritis according to the extent of bowel involvement in ulcerative colitis. In literature the incidence of RF positivity is not higher in patients with IBD and peripheral arthritis than in the general population (12). Latex fixation test rheumatoid factor (RF) was negative in all except one patient who had monoarticular knee involvement (RF = 45 IU/ml).
In IBD, sacroiliitis is the most important extraintestinal manifestation. Studies shown that spondylitis is clinically and radiologically indistinguishable from idiopathic ankylosing spondylitis and that spondylitis occurs in 3-6% of patients with CD(13). Deker-Saeys et al. have shown that in IBD the incidence of sacroiliitis is about 10%(14), while Mielants et al. found it to be about 5-12%(15).

Conclusion

CD is a disorder can have many complications, both within and outside of the intestinal tract. Certain is that the association between CD and Arthritis is reported in the literature and in our study, but the basis of this association is unknown. HLA B27 is an inherited gene marker associated with a number of related rheumatic diseases; this gene is found with highest prevalence in patients with ankylosing spondylosis, reactive arthritis and patients with the combination of peripheral arthritis and or inflammatory bowel disease. In our study HLA B 27 is significantly high only one case out of seven with arthritis (14,2%) .
A better understanding of the role of genetics and environmental factors in the cause of Crohn's disease will improved the treatments and prevention of the disease. It is necessaries the multidisciplinary approach (gastroenterologist, orthopaedics, dermatologist, surgeon) of inflammatory bowel disease to improve quality of life of this patients.

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L'ARTRITE NEI PAZIENTI CON MORBO DI CROHN: LA NOSTRA ESPERIENZA

L'artrite può presentarsi in associazione con le malattie infiammatorie croniche dell'intestino (Crohn o la Colite Ulcerosa). La patologia artritica colpisce di solito una grande articolazione e la manifestazione clinica si presenta quando la malattia intestinale è nella sua fase attiva. L'artrite e la malattia di Crohn insieme possono essere una causa rilevante di sofferenza. A volte le manifestazioni artritiche sono il primo sintomo che portano il paziente ad effettuare controlli clinici. Gli autori descrivono il loro studio effettuato su 45 pazienti affetti da malattia di Crohn che hanno presentato manifestazioni artritiche.

Keywords: Spondilite, sacroilite, malattie infiammatorie croniche

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