

Dermatological lesions of patients with inflammatory bowel disease - single center study

Lesões dermatológicas de pacientes com doença inflamatória intestinal- estudo de centro único

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ABSTRACT

Introduction Inflammatory bowel diseases affect approximately 10 million people in the world and a third of them develop dermatological lesions during their illness. This work was carried out to verify the incidence of this type of lesions. Materials and methods: 120 patients with a diagnosis of inflammatory bowel disease were included in this study and documentation of the dermal lesions presented in their disease was carried out. Results: The most common age of presentation of dermal lesions was between 15 and 25 years with an incidence of approximately 70%, the most frequent was erythema nodosum with a 53% incidence followed by pyoderma gangrenosum present in 29%; Most lesions were chronic in 58% of cases and occurred mainly in patients with mild outbreaks in 79%, followed by patients with severe outbreaks in 18%. Conclusions: These dermal lesions are more frequent in young patients with a mild outbreak and were very rare in those patients with inactive disease.

Keywords: inflammatory disease, colitis, dermatology.

RESUMO

Introdução As doenças inflamatórias intestinais afetam aproximadamente 10 milhões de pessoas no mundo e um terço delas desenvolve lesões dermatológicas durante a doença. Esse trabalho foi feito para verificar a incidência desse tipo de lesão. Materiais e métodos: 120 pacientes com diagnóstico de doença inflamatória intestinal foram incluídos neste estudo e foi realizada documentação das lesões dérmicas apresentadas na doença. Resultados: A idade mais comum de apresentação de lesões dérmicas foi entre 15 e 25 anos com uma incidência de aproximadamente 70%, a mais frequente foi eritema nodoso com uma incidência de 53% seguida de pioderma gangrenosum presente em 29%; A maioria das lesões foi crônica em 58% dos casos e ocorreu principalmente em pacientes com surtos leves em 79%, seguidos por pacientes com surtos graves em 18%. Conclusões: Estas lesões dérmicas são mais frequentes em doentes jovens com um surto ligeiro e foram muito raras nos doentes com doença inativa.

Palavras-chave: doença inflamatória, colite, dermatologia.

1 INTRODUCTION

Inflammatory bowel diseases affect approximately 10 million people in the world and a third of them develop dermatological lesions during their disease, being classified dermatologically as patients at high risk of developing this type of lesions.

The magnitude of these injuries and in whom they occur is something that has been studied extensively in the literature, but we present a review of our own statistics.

2 MATERIALS AND METHODS

Non-interventional, analytical, cross-sectional observational study. The sample used in this research study consists of 200 subjects. Computer programs were used for statistical organization.

Patients with incomplete clinical history were excluded from this study, as well as oncological patients or patients whose surgery was performed urgently, which could generate bias in the study.

Age and sex were taken as study variables. Most frequent dermatological lesions and site of appearance, as well as control of the disease.

3 RESULTS

Table 1: Incidence by Age

Edad	Age at presentation of dermal lesions	
	N	%
15-25	85	70.83
25-40	15	12.5
40-65	12	10
>65	8	6.66
Total	120	100%

Source: taken from research database

In our study, it was found that the highest incidence of presentation of this type of injuries occurred in the age group between 15 and 25 years with an incidence of approximately 70%, followed by injuries in patients aged between 25 and 40 years with an incidence of 12.5%.

Table 2: Incidence of most frequent injuries

Injuries	Most Frequent Injuries	
	N	%
Erythema nodosum	64	53.3
Pyoderma Gangrenosum	35	29.16
Pyodermatitis Vegetans	10	8.33
Panarteritis nodosa	11	9.16
Total	120	100%

Source: taken from research database

In our work, the most frequent lesion of this type of pathology was erythema nodosum with an incidence of 53.3%, followed by pyoderma gangrenosum with an incidence of 29.16%;

These two being the most representative of the type of pathologies, followed by pyodermitis vegetans and panarteritis nodosa with 8.3% and 9.16% respectively.

Table 3: Lesions according to time of evolution and control of the disease

Time of evolution	N	%
Acute	50	41.6
Chronic	70	58.3
Disease Control		
Idle	3	2.5
Mild Outbreak	95	79.16
Severe Outbreak	22	18.33

Source: taken from research database

Most of these injuries occurred chronically with an incidence of 58%, chronic being defined as persistent presence of injuries for more than 30 days and acute injuries of less than 30 days of evolution, an incidence of 41%.

Regarding the control of the disease, we see that very little occurred in patients with inactive disease, presenting only in 2.5% of cases, with its highest peak incidence being a mild outbreak with an incidence of 79% followed by a severe outbreak with an incidence of 18%.

4 DISCUSSION

Inflammatory bowel disease (IBD) is defined as chronic inflammatory disorders of the gastrointestinal tract that affect approximately 10 million patients worldwide (1). Its pathogenesis consists of the presence of a dysfunctional intestinal microbiota, alteration of the immune response, environmental variations and genetic variants (2).

In turn, it is classified into Crohn's disease and ulcerative colitis; The difference is that ulcerative colitis affects the mucosa and submucosa of the gastrointestinal tract and characteristically begins in the rectum and extends proximally. Crohn's disease affects the entire thickness of the intestinal wall, from the mucosa to the serosa, and can appear in any part of the gastrointestinal tract (3).

La incidencia de las manifestaciones extraintestinales cutáneas tiene una variación entre el 6% y 47%. About a third of patients with inflammatory bowel disease develop extraintestinal manifestations and among them, a third have skin lesions. They can vary in severity and can often be debilitating (4). Among the skin manifestations that occur in IBD are specific changes caused by the granulomatous inflammatory process, reactive changes, lesions resulting from the treatment applied and changes related to the deficiency of vitamins, micro and macroelements (5). Skin manifestations in patients with inflammatory bowel disease are usually

specific lesions, reactivation lesions, manifestations related to nutritional malabsorption or the therapeutic regimen, or they can be diverse lesions (6). Dermatological manifestations are a common complication of both IBD and its treatment (7).

Skin lesions share similar pathophysiological mechanisms with intestinal involvement or may appear as lesions secondary to treatment or malabsorption (8). Specific cutaneous manifestations reveal histological findings identical to those of the intestinal lesions of IBD. Reactive skin manifestations of IBD with immunological mechanisms triggered by common antigens shared by intestinal bacteria. IBD-associated skin disorders are reported in IBD patients without specific IBD-related histological features or mechanisms (9).

Table 4: Dermal Lesions in Inflammatory Bowel Disease

Dermatoses in Inflammatory Bowel Disease	
SPECIFIC	NOT SPECIFIC
Pyodermatitis-pyostomatitis vegetans Orofacial granulomatosis Metastatic Crohn's (cutaneous) Perianal Crohn's	Erythema nodosum Pyoderma gangrenosum Sweet syndrome Gut-associated arthritis-dermatosis syndrome Intraepidermal IgA neutrophilic dermatosis Acne fulminans Takayasu arteritis Cutaneous panarteritis nodosa Leukocytoclastic vasculitis Recurrent aphthous stomatitis Linear IgA bullous dermatosis Epidermolysis bullosa acquisita

Source: Mir Bonafé JM, Fernández López E, Nieto González G, De Unamuno Pérez P, 2011.

The most common nonspecific skin lesion in IBD is erythema nodosum, which is a reactive lesion that closely parallels the activity of the intestinal disease. It occurs in up to 3% to 10% of patients with UC and between 4% and 15% of patients with CD, and occurs more frequently in female patients between 25 and 40 years of age(11). It is characterized clinically by raised, painful, red (or violet) subcutaneous nodules, 1 to 5 cm in diameter, typically appearing on the extensor surfaces of the lower extremities, most frequently in the anterior tibial area (12). Pyoderma gangrenosum is the second most common skin lesion and one of the most debilitating (13). Initially it presents as single or multiple painful erythematous papules or pustules that, after dermal necrosis, lead to ulcerations with deep excavation and sterile purulent material (14). Sweet syndrome is mainly characterized by the presence of erythematous papules-plaques, vesicles and pustules on the face, neck and upper limbs(15). Aphthous stomatitis are rounded or oval ulcers excavated from the mucosa of the mouth, of different sizes, with a grayish-white center and an erythematous edge. They are indistinguishable from common canker sores or those associated with other diseases(16). Metastatic Crohn's Disease

can have different clinical forms, such as erythematous plaques, abscessed nodules or ulcerated tumors (17).

Clinicians should be alert to dermatological side effects after IBD treatment with anti-TNF (18). Anti-tumor necrosis factor, such as infliximab and adalimumab can rapidly control disease activity, exert steroid-sparing effect, promote mucosal healing. However, with the increasing use of these agents, some paradoxical inflammations affecting the skin, joints, and lungs have been described and received increasing attention in recent years. Of these, paradoxical psoriasis or psoriasiform lesion induced by anti-TNF therapies is one of the topics of greatest concern worldwide (1).

In adults with IBD, the prevalence of paradoxical psoriasis has been estimated between 1.6% and 22% (19). Anti-TNF-induced psoriasis, which can manifest *de novo* or as an exacerbation of pre-existing psoriasis, is the most common induced skin reaction, while other lesions, such as eczematiform lesions, vasculitis or granulomatous skin reactions, occur less frequently. frequency (20 , 21 ,22) .

Aphthous stomatitis is present in approximately 10% of IBD patients, most commonly in chron disease. Psoriasis Seven to 11% of IBD patients develop psoriasis, an erythematous/scaly disease that occurs more frequently in CD than UC (11).

5 CONCLUSIONS

The study universe represents patients who presented dermal lesions in our hospital service, but the real incidence of this type of lesion is far from being reliable due to the underdiagnosis of these lesions; Despite this, the presence of an outbreak was evidenced as a risk factor for presenting these lesions, which is why joint treatment with a multidisciplinary team that includes a dermatologist is recommended as part of the approach to this type of patient.

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