Original article

Pruritus ani: aetiologic and causative factors in 94 adult patients

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Abstract: Our study analyses data regarding 97 patients (56 females and 41 males; mean age: 50,1; range: 19-91) with a history of pruritus ani with a duration of at least four weeks, who presented to our ambulatory care centre for anal and rectal disease, Surgical Division II - University of Padova. All patients were investigated for surgical and dermatologic diseases. Results show that in a patient suffering from pruritus ani there is an association with surgical anorectal conditions such as haemorrhoids, fissures, and mucosal prolapse as well as dermatologic inflammatory diseases such as eczematous dermatitis and psoriasis. This association is statistically significant ($p < 0.05$) and confirms that the presence of itch as a symptom common to these diseases.

Key words: Pruritis ani; Dermatology; Dermatitis; Anorectal conditions.

INTRODUCTION

A chronic itch around the anal area is called pruritus ani. It can be due to a localised dermatitis (caused by faeces, sweat, or moisture), viral, bacterial and fungal infection, metabolic or systemic diseases (lymphoma, iron deficiency anaemia, hyperthyroidism, diabetes, etc.), skin conditions (psoriasis, contact dermatitis, atopic dermatitis, or lichen planus), anal fissure, haemorrhoids, threadworms, irritants (soaps, perfumes, or creams), some foods (grapes, or tomatoes), some drugs (laxatives, anaesthetic agents, antibiotics), or a carcinoma of the anus.

In many cases Pruritus ani is of unknown origin and is known as idiopathic pruritus ani.

The aim of this study is to assess the prevalence of different causes of pruritus ani in adult patients who presented to the Department of Surgery, University of Padova, between December 2003 and October 2005.

MATERIALS & METHODS

A total of 97 patients (56 females and 41 males; mean age: 50,1; range: 19-91) suffering from pruritus ani for at least four weeks presented to our ambulatory care centre for anal and rectal disease in the Department of Surgery at the University of Padova between December 2003 and October 2005. Initially systemic and/or gastro-intestinal diseases were excluded. All subjects underwent a full proctologic examination. We obtained from each patient a thorough medical and family history to assess the presence of atopy, and each subject underwent a dermatologic examination including a standard European Patch test (FIRMA- Italy) and a patch test to Dermatophagoides mix (Chemotechnique Diagnostics, Sweden).

We also performed a chemical and physical examination of the stool, perianal sample, scotch test, and stool examination for parasites for each patient. Skin biopsy with histologic examination was performed in a single case of uncertain diagnosis. Chi-square statistics were used for statistical analysis of data.

RESULTS

Eczematous dermatitis was diagnosed in 40 patients: 23 of them presented with a history of atopy and 20 out of 23 patients in this group had a positive patch test to one or more allergens (potassium dichromate: 12; cobalt chloride: 6; nickel: 10; dermatophagoides mix: 11; clorexidine: 1; euxyl: 3; formaldehyde: 2; quaternium: 2; disperse yellow: 1; neomycin: 4; balsam of Peru: 6; carba mix: 1; lanolin: 1; katon: 1; benzocaine: 1; disperse blue: 2). perianal sample culture was positive in 7 patients (Staph. aureus: 3; Candida: 2; Strept. B: 2).

One or two non-dermatologic anorectal diseases were present in 21 patients: (haemorrhoids: 14; fissuress: 6; mucosal prolapse: 6; rectocoele: 1). Psoriasis was present in 24 subjects, 3 of them were atopic, 5 (2 of them were atopic) had positive patch test (potassium dichromate: 3; perfume mix: 1; nickel: 2; lanolin: 1; cocamidopropyl betaine: 1; formaldehyde: 1; disperse blue: 1; dermatophagoides mix: 2; katon: 1) and 8 of them had positive perianal samples (Candida: 6; Strept. B: 2). Among the 24 psoriatic patients we observed local non-dermatologic diseases, variously associated, in 15 cases (haemorrhoids: 13; mucosal prolapse: 6; fissure: 6).

Intertrigo caused by Candida with negative patch test and without association to atopic or psoriasis were present in 10 subjects. Among them we observed non-dermatologic anorectal disease in 6 cases (haemorrhoids: 4; fissures: 2; mucosal prolapse: 1).

Lichen planus was present in 4 patients and one of these subjects was atopic with a positive patch test (dermatophagoides mix, nickel, perfume mix); 4 patients had lesions histologically consistent with scleroatrophic lichen, and 2 of them had positive perianal sample to Candida. We observed associated anal and proctologic surgical diseases in 6 patients among those affected by lichen (haemorrhoids: 5; fissure: 3; mucosal prolapse: 1). Non-mycotic infections were present in 8 patients: anal condylomata: 4; primary syphiloma: 2; herpes Zoster: 1; anusitis caused by oxyuris: 1; anusitis caused by threadworms: 1. The patient with herpes Zoster had also mucosal prolapse and haemorrhoids. These patients, as well as a patient affected by Bowen's disease and another one affected by spinocellular carcinoma, had negative patch test and cultures. Six patients had negative physical examination and were negative in all other exams.

In total, among the 97 patients, 65 presented with an association between surgical anorectal diseases (SARD) and inflammatory dermatologic diseases (IDD), 20 patients had IDD without clinical evidence of SARD, while 6 subjects had a SARD without dermatologic involvement.

CONCLUSIONS

Our study shows an association between pruritus ani and the diagnosis of either SARD or IDD. This association was statistically significant ($p < 0.05$). If a disease is present, it is more likely to be dermatologic: 25 IDD against 5 SARD.

It is likely that SARD could be influenced by dermatologic diseases and vice versa, for instance the anal fissure can manifest itself on a skin which loses elasticity due to dehydratation, hyperkeratosis, or infiltration. Haemorrhoids with mucous leakage cause cutaneous maceration with or without complications; even psoriasis can be an expression of Koebner's phaenomenon, a consequence of scratching due to itch of proctologic origin.

Due to the unique environment of the perianal area and to patients' personal habits factors such as humidity, passing of faeces, anaerobiosis, cleaning habits, inappropriate use of ointments and several dermatologic diseases (infective anusitis, psoriasis, atopic eczema, contact eczema) can co-exist and influence each other, resulting in complex clinical presentations. This is well shown by our series of cases, where the presence of pathogenic microorganisms has been reported in 33 cases associated with other non-infective inflammatory cutaneous diseases, and sensitization to different aptens registered with patch tests was present not only in all cases of contact dermatitis, but also in 20 out of 23 atopic patients, in 5 psoriatic patients and in 1 case of lichen planus. The positive allergic reaction on patch testing in psoriasis and lichen can have, in the opinion of some authors, aetiologic significance.[1-5]

In all positive test patients, patch tests were positive to one or more aptens somehow related to the particular place involved, i.e. contained in some ointments, cleansings, cosmetics or dyes (clothing).

In considering the diagnosis and management of pruritus ani, it is important not to forget psychological factors [6-8] which are frequently emphasized by authors but subject to different interpretation. Important psychological factors include latent homosexuality, sexual or professional dissatisfaction, an expression of an obsessive compulsive personality disorder (excessive cleanliness), a sign of self-punishment in subjects with tendencies to masochism. In our series of cases psychological factors seemed significant in at least 6 cases where we could not find any surgical nor dermatologic cause of symptoms.

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