

Pruritus Ani

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Introduction

Pruritus ani is one of the most controversial problem in proctology and lots of questions are still open: is it a disease or a symptom? Why men are more often affected than women? Which is the relation with depression or psychological disorders?

Its aetiology, diagnosis and treatment are often a difficult challenge for the specialist.

Anal pruritus, an intense chronic itching affecting the perianal skin, is a common condition. It affects up to 5% of the population, with a male to female ratio 4:1¹.

Perianal itch is physical, not psychological, and very common. It is the skin immediately adjacent to the anal margin that is most often affected, although it is clear that symptom may be located anteriorly up to and including the vulva or scrotum.

Perianal skin is vulnerable towards different kinds of noxae patogenae. The patient eases the itch by scratching the perineum, which

produces short lived relief. Continued scratching causes damaging excoriations, which may bleed. A vicious circle of itching and scratching develops and it is difficult to break, inducing a state of nervous exhaustion² (fig. 1).

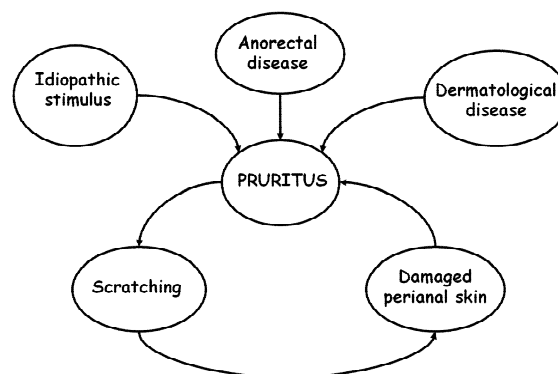


Fig. 1 Evolution of pruritus ani

Aetiology

The majority of cases of anal pruritus have a benign aetiology, such as fecal soiling and dietary factors. Coexisting perianal pathology is often present as occasionally a serious underlying medical condition.

The incidence of primary and secondary pruritus ani varies among different studies. Several studies show that the incidence of idiopathic pruritus ani is 25--95%. Nearly 100 different causes for pruritus ani have been reported. The majority of co-existing conditions are anorectal, predominantly haemorrhoids and fissures. Dermatological conditions are usually not restricted to the perianal area, but the morphology of perianal skin lesions may be atypical for the disease elsewhere.

Faecal contamination causing pruritus ani is not simply a matter of prolonged contact with a moist substance or a hygiene issue, nor is it inevitable. Faecal contamination or soiling may

be overt or occult. Occult soiling is insufficient for an individual to be aware, but enough to initiate itch and scratching.

Studies have investigated stool consistency and mucous seepage as an aetiological factor. One found 50% of patients with pruritus ani having loose stools and this group reported at least weekly faecal soiling in 41%¹.

Smith showed an exaggerated recto-anal inhibitory reflex and earlier incontinence in anorectal physiology tests in patients with pruritus ani⁴.

One study, using computerised ambulatory electromyography and manometry, demonstrated a longer duration of internal sphincter relaxation in patients with anal pruritus compared with controls⁵.

Altered anal morphology may lead to faecal soiling in some patients and this could be a primary or postsurgical problem. These



individuals seem to be unable to completely evacuate their anal canals and the retained faecal material escaped later with resultant itch.

Foods have been implicated in idiopathic pruritus ani such as caffeinated drinks, alcohol, milk products, peanuts, spices, citrus, grapes, tomato (hystamine) and chocolate. Some researches have claimed diminution of itch within 14 days if these were avoided^{4,6,7}.

Mechanism by which foods are thought to cause itch are reduction in anal sphincter pressures, and exaggerated anal reflexes.

Although occurring in a minority of cases, the importance of bacterial and fungal infection should non to be underestimated. Fungal infections account for up 15% of patients and are caused by Dermatophytes and *Candida albicans* above all in patients affected by diabetes or after steroid and antibiotic use⁵.

Sexually transmitted bacterial infections cause pruritus ani, but chronic symptoms are likely to be caused by other bacteria such as Beta-Haemolytic streptococci, *Staphylococcus aureus* and *Corynebacterium minutissimum*.

Some parasites should be considered in the aetiology of pruritus ani too, above all in children (*Enterobius vermicularis*).

Any coexisting anal conditions can precipitate or exacerbate itching. Up to 52% of these patients have haemorrhoids, which is the

commonest condition. In a series of patients a quarter of the proctological causes of pruritus ani were anal or colorectal cancer¹.

Dermatological conditions are frequently cause of pruritus ani. Psoriasis represents the most frequent condition in these patients, but we have to remember Paget's disease, Bowen's disease, lichen sclerosis and squamous cell carcinoma.

The use of some topical products, such as topical steroids, soaps, shower gel, creams, talc, perfumed toilet paper, baby wipes and latex condom, can cause itch by a sensibilization of perianal skin as some orally ingested medications such as laxatives, colchicines, quinidine, peppermint oil and some antibiotics.

Any medications which induces an alteration of bowel function, constipation or diarrhea, can induce pruritus ani.

Systemic diseases can lead to pruritus ani and most commonly diabetes mellitus, liver diseases, leukemia, lymphoma, renal failure, iron-deficiency and hyperthyroidism.

Anxiety, stress and certain personality traits may contribute to arise the itch.

In fact pruritus ani may be the first manifestation of depression or psychological disturbances (tab. 1).

Table 1 Aetiological factors in perianal pruritus

Idiopathic perianal pruritus

Secondary perianal pruritus

- Dermatological disorders (atopic dermatitis, allergic contact dermatitis, psoriasis, lichen sclerosis, extramammary Paget's disease, squamous cell carcinoma)
 - Infections
 - Bacterial (*Staphylococcus aureus*, group A and B streptococcus)
 - Intertrigo
 - Fungal (candidiasis, dermatophytosis)
 - Parasitic (*Enterobius vermicularis*, scabies)
 - Sexually transmitted diseases (herpes simplex virus infection, syphilis, condyloma acuminata)
 - Local irritants (faecal contamination, sweating)
 - Systemic disorders (diabetes mellitus, lymphoma, psychogenic factors)
 - Anorectal diseases (fissures, fistula, haemorrhoids, inflammatory bowel disease)
 - Others (hygiene, food)
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Diagnosis

It is important to take a careful history of the patient in order to identify readily treatable causes and exclude or diagnose serious pathology. Patients have to be convinced to remember any relevant history they may have had previously. Their history should cover the onset and time of the symptoms, significant medical conditions, other skin complaints, bowel habit, drug and dietary history, dermatosis, family history of inflammatory bowel disease, diabetes or bowel cancer, sexual habits, psychological disturbances and social history.

You have to consider that pruritus ani is an embarrassing problem which lead the patient to the physician after an indiscriminate use of topical therapies. Direct inquiry of their utilization is essential because the first cause of pruritus ani may be hidden by the arise of other skin pathology.

The examination of the patient should not be limited to the anoderm, but must include examination of external genitalia, perianal

area, mucous membranes, nails, scalp, beard, chest, axillae and groin looking for dermatosis, lice, scabies, drug eruptions and secondary syphilis.

The next step is the rectal digital examination followed by the use of a lubricated proctoscope. Both of them can show different problems as anal canal pathologies as the integrity of anal sphincter or the presence of bleeding. If a mass is diagnosed during the examination, a biopsy should be performed (fig. 2).

In patients with history or examination suggestive of other causes, and in those not responding to conservative care, relevant investigations may include full blood count, immunoglobulin E, blood glucose, syphilis serology, tissue transglutaminase, swabs for microscopy and culture, patch tests.

Last but not least, colonoscopy must be always considered if there is a doubt of some colorectal pathology.

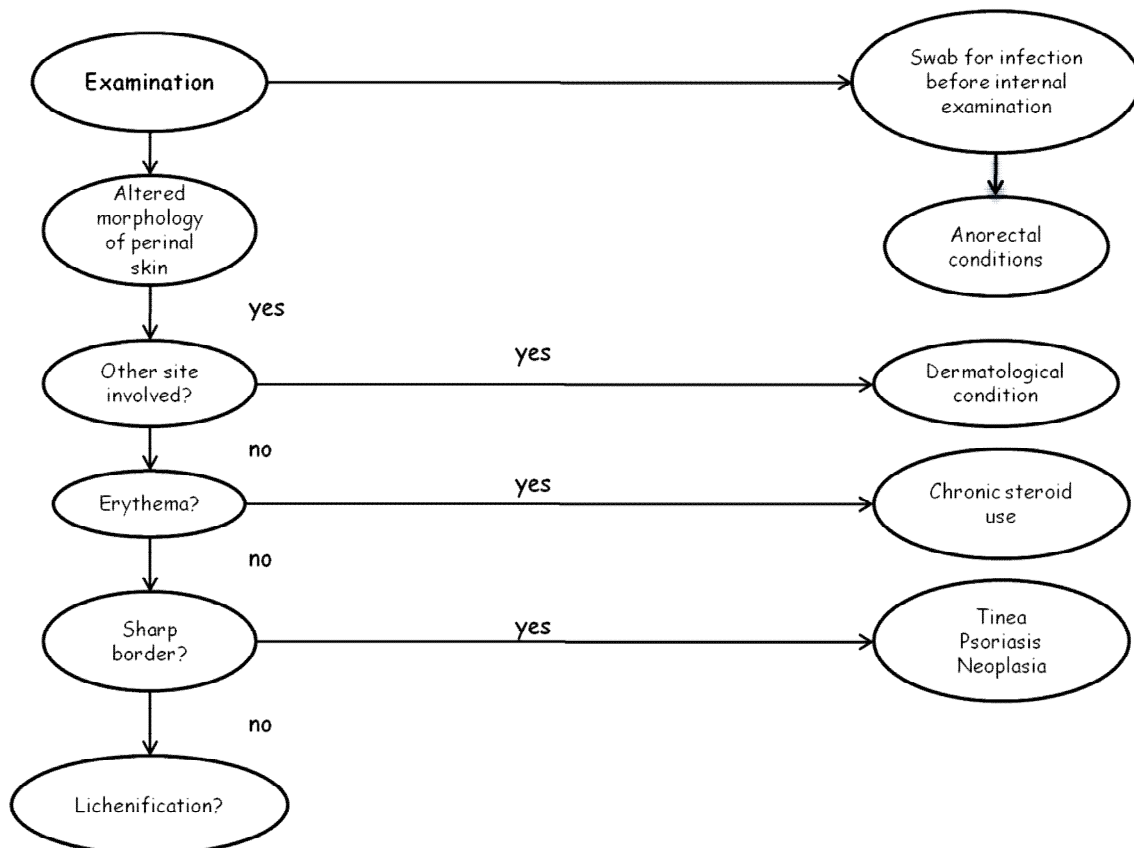


Fig. 2 Examination algorithm of pruritus ani



Therapy

Any underlying identified cause need to be appropriately treated. Dermatological conditions should be treated by an appropriate specialist, infections should be treated by an adequate antibiotic therapy as anorectal conditions should be treated surgically, when it is necessary.

It is important to educate the patient about the disturbing but benign nature of this irritating condition and to ensure adherence to the following simple, yet essential, measures to eliminate irritants and solve symptoms.

Treatment is made by two fundamental steps. The first one is to provide the patients with guidelines on how to minimize their symptoms (tab.2).

Tab. 2 Guidelines for patients with pruritus ani

- Keep the anal area clean by washing after defecation
- Avoid medicated soaps which may cause sensitisation
- Dry the anal area by gentle dabbing
- Use only specifically prescribed ointments
- Avoid acrylic and nylon underwear
- Mantain a regular bowel habit
- Avoid highly seasoned and spiced foods
- Wear cotton gloves at night to reduce the damage from subconscious scratching

Strict adherence to such advice undoubtedly helps and the regimen may be relaxed as symptoms decrease. Many patients continue to suffer and can improve with some applications of topical steroid, such as 1% hydrocortisone, barrier creams such as zinc oxide and during the night advice the use of systemic antihistamines to reduce the nocturnal scratching.

Otzas et al. have demonstrated there is no difference in the results of treatment using topical steroid or a correct hygiene⁹.

The second step provides active treatment of pruritus ani, considering the mild-to-moderate and the severe symptoms.

Mild-to-moderate symptoms with minimal skin changes can be treated with a light topical steroid such as 1% hydrocortisone applied twice a day after washing, combined with antibacterials or antifunginals¹.

If symptoms regress, application can be reduced while substituting with a barrier cream. Patients should be informed of side

effects and the need to limit treatment duration.

Severe symptoms and skin changes require stronger topical steroids, but for no more than 8 weeks unless directed by a specialist.

Once the skin heals or normalizes, switch to a lower potency topical steroid. Side effects occur much less frequently with 1% hydrocortisone application than potent topical steroids, but the maximum safe duration has not been described. It should be reasonable the use of topical steroids for longer than 8 weeks but not indefinitely¹.

At any stage, if the response is poor, one must reconsider the diagnosis.

Some patients with idiopathic pruritus ani respond favorably to such conservative management. Unfortunately, a significant percentage of patients remains highly symptomatic and represents an important clinical challenge. Attempts to treat refractory pruritus ani include perianal injection of anaesthetic agents or surgical disruption of the sensory nerve supply to the perianal area, can lead to significant side effects³.

In the last years several authors have considered the use of topical capsaicin in a 0,006% preparation. Capsaicin is a natural alkaloid extracted from red chili peppers. Its effect is mainly depletion of substance P from sensory neurons. Capsaicin has been described as an effective drug in the treatment of histamine induced pruritus, itching associated with uraemia, nodular pruritus and in the postmastectomy syndrome.

Lysi treated only patients with intractable pruritus ani. Topical capsaicin cream in concentrations of 0,025%, 0,5%, and 1% had previously been used to treat itch in other pathologies. Although no serious side effects have been reported, the burning sensation at the side of the application prevented its use in this area of the body which is very sensitive³.

In his study, Lysi found that the better concentration for the treatment of pruritus ani is 0,006%. He demonstrated that patients experienced a relief after the first day of treatment without a significant burning sensation. The trial was conducted as an open label study and responders stopped daily capsaicin application. Although itching recurred sporadically in all patients, patients needed a mean application of capsaicin for one or two days to remain symptoms free. A long term follow up study showed that therapeutic effect of capsaicin did not decrease in general over time. It seems that burning sensation of capsaicin decreases over



the time and probably it's possible to use higher concentration of this drug³.

Further studies are necessary to more precisely establish the range of effective capsaicin concentration for long term therapy. Anal tattooing should be considered in those who have failed other treatment measures, become steroid dependent or in whom symptoms severely impact on quality of life.

The first who advocates this treatment was Shafik. He proposed the subcutaneous injection of 1% methylene blue, 20ml 0,5% marcaine and 40 mg steroids of the entire perianal area. He reported a success in 97% of the patients after a single injection³.

Unfortunately some series reported cases of skin necrosis. The technique has been modified and it involves several intradermal

and subcutaneous injections of 10ml 1% methylene blue +5 ml normal saline + 7,5ml 0,25% bupivocaine with adrenaline (1/200000) + 7,5ml 0,5% lidocaine. Patient is in prone jackknife position under sedation or general anaesthesia. Intradermal methylene blue injections can resolve up to 90% of cases. A single treatment can be sufficient in almost 80% of cases.

The main side effects of this therapy are a transitory fecal incontinence and a transient hypo-aesthesia, which may take a year to recover. This suggests that nerve endings have been destroyed by methylene blue.

The tattoo should be visible for 2-6 weeks after the injection, any less suggests placement of the solution deeply.

Conclusion

Pruritus ani is defined as intense chronic itching affecting perianal skin. It affects 5% of the population. It is four times more common in men and is more frequent between the fourth and sixth decades of life.

Pruritus ani is classified as idiopathic when no cause can be found. However as 50% of cases have a co-existing pathology a detailed history and examination is required. Nearly 100 different causes for pruritus ani have been reported and the majority of the conditions are anorectal, but we have to remember dermatological conditions which are not restricted only to perianal skin.

When pruritus ani is the only symptom, often it is associated to a dermatosis secondary to

skin lesions which can be colonised by bacterial or fungal.

In any case the itch can lead to the release of histamine and to pruritus ani.

The anorectal area is particularly vulnerable and anatomical, histological (the transitional area of the canal anal is very fragile), and physiological factors (faeces have an irritant role) can lead to pruritus ani.

Treatment of pruritus ani should be directed to remove the cause/s of the symptom, following the guidelines we have reported.

The diagnosis and the treatment of pruritus ani is a very difficult problem to be solved and several times represents a great source of dissatisfaction for the proctologist.

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