

# THE INVESTIGATION AND TREATMENT OF ANOGENITAL PRURITUS

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The patient with anogenital pruritus sets a difficult diagnostic problem for several reasons.

This symptom may be due to one or more of a motley group of causes, ranging from outward irritation from parasites, fungous and coccal infections, chemicals and local skin diseases, through more general causes including toxic states, metabolic disorders, and nutritional deficiencies, to the other extreme of psychogenic irritation caused by an unresolved psychosexual conflict.

Similar or even identical physical signs may result from many different causes and they indicate psychophysical type reactions of the patient rather than the nature of the cause. Thus, a follicular eruption may arise from nutritional deficiency, chemical insult, bacterial and fungous infection with or without obvious physical injury, or from an emotional upset. Often the action of two or more of these noxae coincides and the status *seborrhoeicus* represents the resultant lowered resistance of the follicles to infection with banal organisms. Vitamin B, iron and protein deficiencies account for a proportion of cases of this sort but the remainder are relatively or completely unresponsive to nutritional therapy.

Pruritus usually, but not always, leads to scratching or rubbing, but the results of physical injury to the skin differ from one individual to another, so that eczema may result in one, lichenification in another, a *seborrhoeic* eruption in a third, and psoriasis in yet another if the sufferer happens to be a latent or overt psoriatic.

The physical signs may be aggravated, altered or masked by secondary infection with bacteria and fungi or by injudicious treatment, especially with benzocaine surface anaesthetics, sulphonamides, mercurial antiseptics and fungicides, penicillin, phenol and other bactericidal and fungicidal agents.

The condition found on examination may be the cause of the pruritus, or the result of subsequent physical or chemical damage, or infection, and the primary condition can then only be diagnosed after the clearance of the secondary dermatosis. Mildly infected eruptions demon-

strate this difficulty very well. They may arise from the primary cause, such as malnutrition or chemical irritation from vaginal douche or contraceptive. They may also be due to secondary infection from scratching and rubbing or from the application of therapeutic irritants which set up a chemical dermatitis which soon becomes infected. The paradox of infected chemical dermatitis from antiseptic topical agents is explained by the harmful effect of many of these substances on epidermal cells, leading to a reduction of the self-disinfecting properties of the skin.

Physical examination may reveal a specific skin disease, or a skin reaction which gives a hint of the cause of the pruritus and suggests further lines of investigation. But 'Qui bene interrogat, bene diagnoscit' remains the guiding principle because only a comprehensive history can give the necessary positive information upon which an accurate diagnosis is based. This applies to all types but especially to the psychogenic cases, the diagnosis of which is only made on positive evidence. Leading questions have to be put, to exclude nutritional, contact irritant and psychogenic causes.

Anogenital pruritus may be discussed under the following headings:—pruritus vulvae, pruritus vulvae et ani, pruritus scroti et perinei, pruritus ani.

## Pruritus Vulvae

Enquiry must be made regarding possible local irritation from the use of contraceptives, douches, antiseptics and medicated soaps; vaginal discharges; diabetes; the internal use of drugs such as phenolphthalein, sulphonamides and barbiturates, skin affections elsewhere; the nature of the diet, the presence or absence of gastrointestinal disorders and psychosexual difficulties. This psychogenic form arises in circumstances that have been described as the 'shouldn't, won't and can't situations,' the first two being the most usual. Thus it may occur when fear, revulsion, impotence or widowhood make consummation impossible. The fear of physical harm (a dreaded pregnancy, infection or even cancer); the fear of

family, social and financial harm; the fear of moral collapse itself, may all be responsible. The conflict is often obvious but the help of a psychiatrist is invaluable in the assessment and treatment of those patients in whom the cause seems more obscure because in these circumstances the pruritus may be the result of the reactivation of a basic (incestuous) conflict by some much more obvious recent psychosexual difficulty. This recent stress, in another individual with no similar emotional instability, would by itself not cause pruritus.

Examination is made by routine from head to foot, special attention being given to the condition of the scalp, oral mucosae, tongue, skin and nails, urine and the presence or absence of anaemia. If there is a vaginal discharge, trichomonas infestation and moniliasis must be excluded. In obscure cases a fractional test meal, sugar tolerance curve and blood count may give essential information and valuable guidance for treatment.

The more common conditions found on local examination, with their implications, are:—

(1) No abnormal physical signs. This suggests either a toxic cause as, for example, in pruritus with pregnancy, or a psychogenic basis with marked self-control.

(2) Lichenification implies rubbing without subsequent infection, so that the cause may be any of the causes of pruritus, especially eczema, and seborrhoeic eruptions. Another form more correctly termed 'neurodermatitis' is essentially psychogenic, may involve clitoris, labia, mons or the inner thighs and is to be regarded as a form of autoeroticism.

(3) Excoriations and lacerations imply gouging and scratching without subsequent infection. This unusual phenomenon may be seen in patients in whom guilt factors are prominent and it seems to imply self-punishment and a means of preventing coitus.

(4) Furunculosis and impetigo are usually the result of scratching and rubbing with subsequent infection. Glycosuria must be excluded and a sugar tolerance test is advisable even if the urine is normal. In practice it is always advisable to treat these cases with a low carbohydrate, high protein diet, even in the absence of obvious disturbance of sugar metabolism. Furunculosis vulvae often follows seborrhoeic and eczematous eruptions and lichenification, and so necessitates the same investigations as do these reactions.

(5) Seborrhoeic eruptions suggest nutritional deficiency especially if associated with one or more of glossitis, angular stomatitis, anaemia and koilonychia. The possible ways in which such nutritional deficiencies may arise include dietetic

faddism, especially with a high carbohydrate, low food intake; gastrointestinal disorders, especially achlorhydria and chronic diarrhoea, leading to poor absorption and impaired synthesis of vitamin in the gut; increased demands in pregnancy and lactation; and impaired metabolism from disturbance of liver function by drugs which have been injected (gold, arsenic), swallowed (mepacrine, mercury), or absorbed (sulphonamides, flavine, mercurials, paraphenylene-diamine). These toxic substances may produce generalized dermatoses, but sometimes the pruritus may be worst or most persistent in the anogenital region.

The absence of seborrhoeic manifestations does not in itself exclude a nutritional basis for the pruritus.

Seborrhoeic eruptions also arise in the constitutionally predisposed from increased follicular susceptibility to infection set up by local chemical and physical irritants, and from psychogenic causes, without nutritional deficiency.

The diagnosis of a seborrhoeic eruption is supported by the presence of outlying 'satellite' follicular lesions and seborrhoeic manifestations at other sites, the scalp, brows, lashes, nasolabial folds, aural meati and postauricular folds, axillae, genitocrural folds and the mid line of the trunk.

(6) Intertrigo implies obesity and hyperidrosis with sweat retention, but without subsequent infection. Diabetes must be excluded, but is more common in the next group.

(7) Intertriginous dermatitis implies obesity and hyperidrosis with sweat retention and secondary infection with *Candida* (monilia) albicans and banal cocci. Glycosuria is often present. The condition may also involve the submammary region, intergluteal cleft, umbilicus, digital clefts and, in the male, the glans penis and prepuce. Moniliasis may also occur in pregnancy, possibly in association with lactosuria. The presence of monilia on the skin does not in itself cause pruritus. This fungus, a common skin contaminant, has been demonstrated on the skin of apparently normal women not suffering from pruritus. It is intertrigo, maceration and glycosuria which provide the ideal warm, moist, saccharine conditions for the development of this fungus in the epidermal cells, leading to a pruritic monilial and coccal dermatitis. If, but only if, the fungus is found within the epidermal cells themselves on microscopic examination, the dermatosis may be accepted as definitely monilial in origin. Many cases so diagnosed are, in fact, low-grade coccal infections.

(8) *Tinea cruris* ('eczema marginatum'), differentiated from seborrhoeic eruptions by its clean-cut, scaly edge, usually without 'satellite' lesions,

may involve not only the genitocrural folds, but also the intergluteal region, axillae, soles, toe clefts and finger or toe nails. The diagnosis should be confirmed microscopically.

(9) Vulval dermatitis from contact causes rapidly becomes secondarily infected so that in all cases of infected dermatitis, contact irritants should be suspected. Vaginal douches, contraceptives, alkalis, medicated soaps and antiseptics used as a routine in washing, are common causes, while sensitivity to rubber and dyes and detergents in textiles are more uncommon causes. Hand-transferred irritants may also be responsible, including nail varnish, and varnish and cuticle removers which may cause a patchy dermatitis of the inner thighs, usually in association with dermatitis of the eyelids, neck or periauricular regions. Lack of personal hygiene is rarely the cause of pruritus of other than a mild and transitory type, easily relieved by soap and water. On the other hand, the excessive use of medicated soaps and antiseptic lotions and douches by bacteriophobes is a more common cause of vulval dermatitis and pruritus. In particular, the routine use of liquor chloroxylanolis (B.P.) in bath water in very uncertain concentrations is to be deprecated. Finally, many patients with pruritus vulvae are first seen by the consultant after the unsuccessful trial of a long series of antipruritic and antiseptic applications, of which the most serious offenders are benzocaine derivatives, sulphonamides, mercurials, phenol, iodine and, to a lesser extent, dyes, tar and fungicides. In the highly susceptible, almost any local application may aggravate. Vulval dermatitis may also be aggravated or caused by internal remedies, especially phenolphthalein and sulphonamides, and it has also been reported from quinine, salicylates, barbiturates, phenazone, gold and, more rarely, belladonna, opium and the halogens.

(10) Dermatitis of the labia majora may be the only physical sign and suggests a nutritional cause (aribo flavinosis). Confirmatory evidence may be found from examination of the tongue and lips.

(11) Psoriasis of the vulva implies friction of this area in a latent or overt psoriatic individual. It is an example of Koebner's isomorphic phenomenon, the specific reaction of the psoriatic skin to injury. It may result from any of the causes of pruritus vulvae. Eczematous changes from contact chemical irritants may modify the appearance and intertriginous dermatitis may also become superimposed. Examination of the scalp, nails, knees, elbows and other regions may confirm the diagnosis.

(12) Lichen planus involving the labia minora may cause pruritus vulvae, and confirmation

should be sought in the buccal mucosae, where the lesions do not itch, and at the wrists, lumbar regions, legs and other parts of the skin surface.

(13) Leucoplakic vulvitis is a postmenopausal, chronic, inflammatory, hyperkeratotic and telangiectatic condition leading to atrophic and pigmentary changes, often precancerous, involving the labia and sometimes the skin of the perineum and perianal regions. Bowen's precancerous dermatosis may also arise on the labia as a firm, irregular, raised patch causing intense pruritus. It may occur before the menopause.

(14) Kraurosis is a similar variegated condition of atrophy, sclerosis, pigmentation, depigmentation and telangiectasia, with stenosis of the vaginal orifice.

(15) Lichen sclerosus et atrophicus, a rare condition, is a patchy atrophic form of scleroderma in which a white, atrophic, scaly, rather parchment-like skin is found, often involving the perineum, perianal region, submammary areas and trunk in addition to the vulva. It is usually found in postmenopausal women. It is not a precarcinomatous condition so that its differentiation from leucoplakic vulvitis is most important. There is no reason to suppose any relationship to lichen planus although the latter may have atrophic stages.

(16) Pediculosis must not be forgotten. The ova on the hairs and the lice at the bases thereof may be missed by the unobservant and the presbyopic.

(17) Condylomata acuminata (filiform warts) often cause pruritus and condylomata lata (syphilitic) may also itch.

(18) Vaginal discharges call for a careful examination of the genital tract. Trichomonas infestations arise when the vaginal secretions tend towards alkalinity as a result of damage to the epithelium or disturbance of the normal flora, from gonococcal and other infections. Monilial infection, more common with pregnancy and in diabetes, and discharges set up by retained pessaries and other foreign bodies, may be responsible. Stress incontinence, and subsequent ammoniacal decomposition of the urine, and glycosuria or a highly acid urine must be excluded. Procidencia, cervicitis, erosions and polyposis, if present, should be treated.

### Pruritus Vulvae et Ani

Threadworm infestation may cause vulval pruritus in children, and although this is rare in adults, their presence must be excluded if pruritus ani is also present. Apart from this cause, all the conditions mentioned under Pruritus Vulvae must be considered, bearing in mind that anal pruritus may indicate emotional immaturity and reversion

to a more infantile form of eroticism. (See also *Pruritus Ani*.)

### Pruritus Scroti

Pruritus scroti et perinei is analogous to pruritus vulvae and arises from similar causes, the more common appearances being:—

Dermatitis, from contact causes or aribo-flavinosis.

Seborrhoeic dermatitis.

Intertrigo and intertriginous dermatitis.

Psoriasis.

Lichen planus.

Lichenification.

Furunculosis.

Tinea cruris.

Pediculosis.

Condylomata.

A proportion is psychogenic, based on a psychogenesis comparable to that of the vulval cases.

### Pruritus Ani

Pruritus ani is due to a smaller number of local and general causes. Resistant cases are much more commonly men. In 1948, 87 per cent. of cases of pruritus ani per se at St. John's Hospital for Diseases of the Skin were males. Overflow of pruritus ani to or from the genital region was common in women (26 of 37 cases—70 per cent.) and unusual in men (5 of 79 cases—6 per cent.).

Local causes include:—(1) threadworms; (2) leakage of irritating rectal contents (especially alkaline stools), loss of sphincter control, purgation, diarrhoea, seepage from excess use of liquid paraffin, colitis, proctitis, carcinoma; (3) haemorrhoids, whether primary or secondary to carcinoma of the colon or cirrhosis of the liver; skin tags of the perianal region do not cause pruritus; (4) fissures in or near the anus; (5) fistulae; (6) fungus or monilial infections; (7) seborrhoeic dermatitis; (8) psoriasis; (9) dermatitis from contact irritants; (10) condylomata lata; (11) condylomata acuminata; (12) pediculosis; (13) general causes, possibly including condiments, alcohol, tea and coffee, at least as aggravating factors; (14) nutritional causes (avitaminosis); (15) psychogenic causes; these patients are often obsessional types and the condition represents an imperfect development from the stage of infantile anal eroticism; a relatively minor inadvertent local stimulus may activate the condition.

It is essential to make an examination by anal swabs for oxyuris ova. This is done as follows:—

A glass rod is used with cellophane wrapped around the tip. The cellophane should be gently twisted in the anal canal, outside the sphincter, and it is subsequently detached with two pairs of

forceps, placed on a slide with a few drops of saline, and a coverslip superimposed. Examination is then made under the  $\frac{3}{8}$  in. objective for ova, with special attention to the creased areas of the cellophane.

A psychogenic basis may be suspected from effeminate mannerisms and tendencies in male patients and the life history and environmental circumstances, but a satisfactory assessment can only be obtained by a trained psychiatrist. Unfortunately, owing to the remote infantile nature of the conflict, these patients often prove highly resistant to psychotherapy so that reference to a psychiatrist is only likely to be of value as far as establishment of the aetiology is concerned.

### Treatment

This section will deal with general principles only and not with the treatment of specific vaginal, rectal and dermatological conditions.

Treatment must be based on a conscientious attempt to uncover and remove the cause, and (with few exceptions) no matter what the physical signs may be, thought should always be given to the possible parts played by outward irritants, emotional irritants, infections and parasites, nutritional deficiencies and metabolic causes. The unmasking of one cause must not lead to relaxation of the hunt for others.

A few 'Don'ts' are of great importance in the prevention of prolongation or aggravation of suffering in these cases.

Surface anaesthetics of all kinds and particularly the benzocaine type should be rigorously avoided, as these substances are often the cause, after a few days, of eczematization and gross aggravation of the pruritus. There are few cases in which their use is justified and their very effectiveness leads to the danger of their empirical use without full investigation of a case. Unfortunately, some proprietary preparations contain a combination of oestrogenic and anaesthetizing agents, and for this reason are potentially dangerous.

The use of antiseptic and fungicidal applications is also rarely necessary, as in most cases associated with infection damage to the epidermis by scratching or chemical irritants is responsible. The application of antiseptics will not prevent further furunculosis vulvae or infective dermatitis if scratching continues; on the contrary, their use may reduce the skin's power of self-disinfection, so that infection is in fact aggravated. Sulphonamides, flavine, mercurials and penicillin are all potentially sensitizing agents, especially to an abraded skin surface. A relatively safe application is a 1 per cent. brilliant green in zinc cream, and often a zinc or calamine cream is adequate, in

conjunction with general sedatives, for relief of the pruritus, while the cause is discovered and removed. Some patients are more comfortable from the use of a dusting powder (Conspersus Talci Boricus) than from the use of creams. Pigmentum Magentae is useful for fungous and low-grade coccal infections.

If the cause is believed to be an emotional conflict, the physician is wise to confine himself to an explanation of its more superficial implications and the assistance of a psychiatrist may be indispensable if the patient is mentally so ill as to require psychotherapy. The treatment of pruritus ani on these lines is, unfortunately, much less successful than that of pruritus vulvae.

X-ray therapy is best reserved as an adjuvant for breaking the vicious circle when chronic eczematization or lichenification is present. Its use for moist or infected lesions is not only unhelpful but positively risky as the tissues under such circumstances are unduly sensitive to irradiation, so that undesirable effects may arise.

A useful alternative to X-rays in the treatment of lichenified, psoriatic and scaly eczematous patches is thorium-X in the strength of 1,500 electrostatic units in 1 ml. of spirit, applied once a fortnight for up to six occasions.

There is no place for mutilating operations, such as vulvectomy, for pruritus, excepting only when leucoplakic vulvitis or Bowen's disease is present. Procedures of this nature for 'idiopathic' cases are quite unjustified and almost certain to be followed by a recurrence of the irritation, with increased mental distress. The same applies to nerve under-

cutting and anaesthetic injection procedures.

Oestrogens have a limited sphere of usefulness in the relief of pruritus vulvae. They are justifiably used in menopausal or postmenopausal cases showing atrophic changes and diminished secretion, and in other cases of pruritus vulvae they may be used to give relief by their power of decreasing the pH of the vaginal secretion.

Hydrochloric acid by mouth relieves some cases of pruritus vulvae and is a useful empirical measure even in the absence of an obvious nutritional basis and before a fractional test meal has demonstrated achlorhydria.

In seborrhoeic and other cases with nutritional deficiency a high protein diet, iron, vitamin B complex and crude liver extract injections give prompt relief. In leucoplakic cases vitamin A may help and a trial of multivitamin supplements is justified in all obscure cases. For all cases with infection a low carbohydrate diet is advisable, quite apart from the treatment of any diabetes that may be present.

### Summary

Most cases of anogenital pruritus are caused by one or more of the following:—contact irritants, infestations, parasites, emotional, nutritional and metabolic causes.

Treatment must be based on a careful and comprehensive assessment of the causes, and the physical signs must not be regarded as giving more than a picture suggesting the possible primary and secondary factors at work.

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