Genital rash (including warts and infestations)

Sarah K Edwards

Abstract

Genital rashes are commonly found in attendees at sexual health clinics. They can be caused by infections (including sexually transmitted infections), infestations and dermatoses, and can also be indicators of or worsened by other medical conditions. The diagnosis is usually made on the clinical appearance and can be supported by clinical signs elsewhere, especially in the case of genital dermatoses. There are also a number of normal variants seen in both men and women that should be considered in the differential diagnosis.

Keywords Balanitis; *Candida*; eczema; erythrasma; genital warts; lichen sclerosus; MRCP; pediculosis pubis; psoriasis; scabies; tinea cruris; vulvitis

Key points

- Genital skin disease commonly presents to sexually transmitted infection clinics, and is more common and more florid in uncircumcised men
- Rashes on the genitalia are often atypical in appearance, and examination of the rest of the skin can facilitate the diagnosis
- General medical conditions such as diabetes mellitus can predispose toward genital rashes and should be screened for in cases of severe or recurrent *Candida* infection
- *Candida albicans* is a common opportunist commensal on the uncircumcised penis, and its presence is not proof that it is the primary cause of the dermatosis

Introduction

Genital skin lesions are commonly seen in practice, accounting for a significant proportion of patients presenting to sexual health services and also being incidental findings on genital examination. Infective causes account for most sexual health presentations, especially as genital warts are the most common viral sexually transmitted infections (STIs); they accounted for 15% of all STIs diagnosed in England 2016.[1] Fungal infections such as *Candida albicans* and tinea are the most common cause of non-STI-related infective rashes. Non-infective conditions commonly include eczema (including irritant dermatitis), psoriasis, lichen sclerosus and lichen planus. Dermatoses frequently have a different appearance in the genital area compared with other body sites. The prevalence of genital rash in the general population is unclear, but there is an association with systemic disease both directly, for example with poorly controlled diabetes mellitus, and as a result of treatment, particularly with immunosuppressant therapies.

Clinical approach to genital rashes[2,3]

History

The history should include general medical conditions (e.g. diabetes mellitus), medication and history of atopy and other skin disorders. Skin disorders frequently affecting the genitalia include eczema (including irritant dermatitis), seborrhoeic dermatitis, psoriasis and lichen planus, while lichen sclerosus is uncommonly found at extragenital sites.

A good description of a rash or genital lesion assists in developing the differential diagnosis and looking for supporting features on examination. Important features include:

- site (Table 1)
- associated symptoms, such as itch or soreness
- appearance – whether the area is flat (macular) or raised (papular), individual lesions or confluent areas, changes in skin colour (erythema, hypo- or hyperpigmentation) and diffuse or clear margins.

Examination

A structured genital examination should be performed, including the mons pubis, groins, genitalia and perianal areas. Balanitis describes inflammation of the glans penis; balanoposthitis refers to involvement of both the glans and prepuce. A range of conditions by site is given in Table 1. In addition, appropriate extragenital sites including mucosal surfaces should be examined.

When examining the skin lesions, description should include their number, size and colour, which sites are involved, and their symmetry, shape and arrangement.

Investigations

If the diagnosis is apparent from the physical findings, investigations may not be required. Investigations include:

- culture and sensitivities, if the skin is inflamed or broken; in the genital area, bacterial and candidal overgrowth are common, and the presence of an organism does not imply causality
- skin scrapings – to confirm tinea infection
- skin biopsy – to confirm the diagnosis for refractory conditions, or to diagnose or exclude malignancy or premalignancy
- screening for STIs.

General management

General skin care advice is recommended for all inflammation in the genital skin. This includes avoiding irritants and using emollients as soap substitutes. Care should be taken when using topical corticosteroids in flexural areas as there is a higher risk of steroid atrophy.[2,3]

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Range of conditions by site

	Pubic	Groins	Vulval	Penile	Scrotal	Perianal
Infective	Folliculitis[a] Pediculosis pubis	Candidiasis Tinea cruris	Candidiasis Genital warts	Candidal balanitis Anaerobic balanitis	Scabetic nodules Molluscum contagiosum	Candidiasis Warts
	Molluscum contagiosum Tinea Genital warts	Erythrasma Genital warts	Molluscum contagiosum	Aerobic balanitis	Genital warts	
Dermatoses	Eczema (including irritant, allergic and seborrhoeic)	Hidradenitis suppurativa	Lichen simplex	Lichen sclerosus	Eczema (including irritant, allergic and seborrhoeic)	Psoriasis
		Flexural psoriasis	Lichen planus	Lichen planus	Lichen simplex	Eczema (including irritant, allergic and seborrhoeic)
		Eczema (including irritant, allergic and seborrhoeic)	Eczema (including irritant, allergic and seborrhoeic) Psoriasis	Zoon's (plasma cell) balanitis Psoriasis and circinate balanitis Eczema (including irritant, allergic and seborrhoeic) Non-specific balanoposthitis	Psoriasis	
Miscellaneous		Acanthosis nigricans	Vulval intra-epithelial neoplasia	Premalignant conditions: • Erythroplasia of Queyrat • Bowen's disease • Bowenoid papulosis	Angiokeratomas	
			Fixed drug eruptions Fordyce spots Angiokeratomas	Fixed drug eruptions Pearly penile papules Fordyce spots	Epidermoid cysts Sebaceous cysts	

The range of conditions shown is not exclusive.
[a] Folliculitis can be non-infective.

Table 1

Specific conditions

Infestations

Pediculosis pubis: (Figure 1) this most commonly presents with itch and visualization of the lice and nits, which are usually attached to the pubic hair. Lice are 1–3 mm long and can attach to any body hair, including eyelashes and eyebrows. The diagnosis is based on clinical findings. Screening for STIs is recommended, as is screening and treatment of sexual partners. Treatment is with permethrin 5% cream or malathion 0.5% lotion. Resistance has been increasing mainly in head lice, and topical benzyl benzoate and dimeticone can be used. Alternative treatment for infection around the eyes is occlusion with ophthalmic ointment or petroleum jelly.

Scabies: this usually presents with intense itch 3–6 weeks after infection with *Sarcoptes scabiei*. Signs of classical scabies are of erythematous papules in finger webs where burrows (linear, raised grey-white lesions) may be visualized. Lesions can affect the genitalia, especially as a result of sexual transmission. In addition to the papules, itchy nodules may be found, most commonly on the scrotum. The diagnosis can be confirmed by microscopic identification of the mites. Bacterial culture can be performed if secondary infection is suspected. Treatment is with permethrin or malathion, as for pediculosis pubis, but the scalp also needs to be treated. Sexual partners and household contacts also require treatment. In addition, specific hygiene processes, including washing of bed linen and deep cleaning of bedrooms, must be followed as the mites can survive in dust.

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