

MANAGEMENT OF SYNDROMES

European guideline for the management of balanoposthitis

S K Edwards

West Suffolk Hospital, UK

INTRODUCTION

Balanoposthitis is defined as inflammation of the glans and/or prepuce. It comprises a disparate range of conditions, which are discussed individually below. Normal saline washes should be advised in all cases of balanoposthitis due to the association with poor hygiene. A range of other skin conditions may affect the glans penis. These include psoriasis, lichen planus, seborrhoeic dermatitis, pemphigus and dermatitis artefacta¹. In addition there are premalignant conditions including Bowen's disease and bowenoid papulosis, which form a continuum with penile intraepithelial neoplasia (PIN) but vary in clinical presentation and history².

CANDIDA BALANOPOSTHITIS

Diagnosis

Clinical

- Symptoms: erythematous rash, with soreness and/or itch (see Figure 1)
- Appearance: blotchy erythema with small papules which may be eroded, or dry dull red areas with a glazed appearance.

Laboratory

- Microscopy: of sub-preputial swab or tape ± KOH examination
- Sub-preputial culture
- Urinalysis for glucose.

Management

General

- Normal saline washes.

Indications for therapy

- Symptomatic candida balanoposthitis.

Recommended regimens

- Clotrimazole cream 1%³ twice daily
 - Miconazole cream 2%⁴ twice daily
 - Econazole 1%⁴ twice daily.
- } Equivalent

Alternative regimens

- Topical imidazole with 1% hydrocortisone twice daily if marked inflammation is present
- Fluconazole 150 mg stat orally⁵ in recalcitrant cases or with diabetes.

Special situations

- Nystatin cream 100 000 units/g if resistance suspected, or allergy to imidazoles.

Management of partners

Not strictly necessary. However, there is a high rate of candidal infection in sexual partners who should be offered screening if symptomatic.

Follow-up

Not required unless symptoms and signs are particularly severe or an underlying problem is suspected. If recurrence is a problem exclude factors predisposing to overgrowth of *Candida albicans*:

- Diabetes mellitus
- Broad-spectrum antibiotic use
- Immunodeficiency of any cause (e.g. steroid use, chemotherapy, HIV infection, other)
- Exclude re-infection from partner.

ANAEROBIC BALANOPOSTHITIS⁶

Diagnosis

Clinical

- Symptoms: foul-smelling discharge, swelling and inflamed glands
- Appearance: preputial oedema, superficial erosions, inguinal adenitis. This is also known as erosive bacterial balanitis. Milder forms also occur.

Laboratory

- Spirochaetes on dark-ground microscopy
- Fusiform/mixed bacterial picture on Gram stain
- Sub-preputial culture (to exclude other causes, e.g. *Trichomonas vaginalis*).

Management

Indications for therapy

- Symptomatic balanitis.

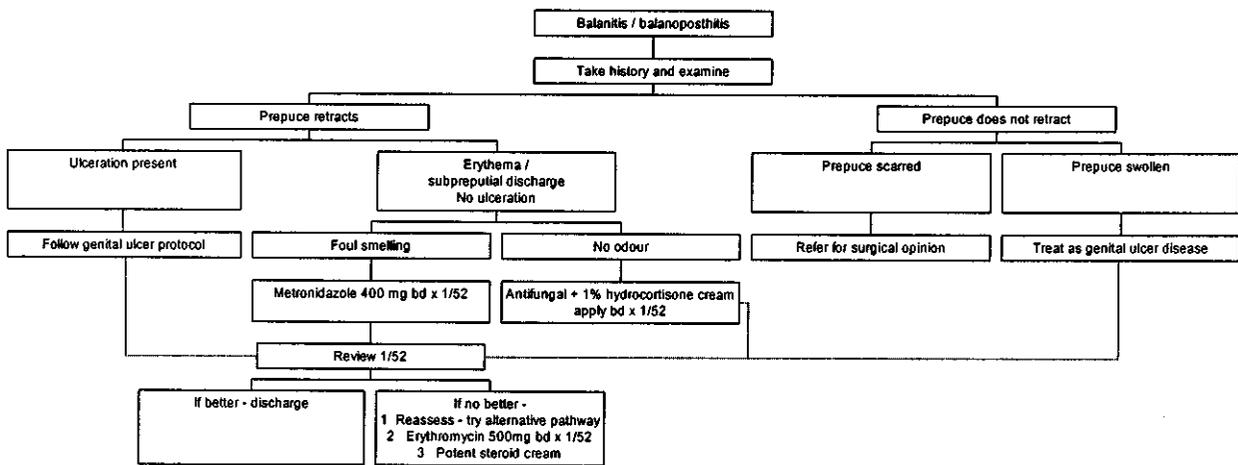


Figure 1. Balanoposthitis—(For all patients: • Advise on hygiene • Look for other STDs • Promote and provide condoms • Suggest partner attend if symptomatic.)

Recommended regimens

- Metronidazole 400 mg twice daily for one week.

Alternative regimens

- Co-amoxiclav 375 mg three times daily for one week
- Clindamycin cream applied twice daily until resolved.

Management of partners

Not strictly necessary. If genital ulcerative disease present, full sexually transmitted infection (STI) screening is required.

Follow-up

Only required if symptoms do not resolve, or other STI suspected.

AEROBIC BALANOPOSTHITIS¹

Diagnosis

Clinical

- Appearances will vary with the organism, from minimal erythema to fissuring and oedema.

Laboratory

- Sub-preputial culture: Streptococci Group A, *Staphylococcus aureus* and *Gardnerella vaginalis* have all been reported as causing balanitis. Other organisms may also be involved.

Management

Indications for therapy

- Symptomatic balanoposthitis.

Recommended regimens

- Depends on the sensitivities of the organism isolated
- Erythromycin 500 mg twice daily for one week will cover for staphylococcal and streptococcal infection
- Fusidic acid 2% cream 3 times daily will cover for staphylococci and other Gram-positive organisms.

Management of partners

Not strictly necessary.

Follow up

Only required if symptoms do not resolve, or other STI suspected.

HUMAN PAPILLOMAVIRUS (HPV) BALANOPOSTHITIS¹

Diagnosis

Clinical

- Clinical picture of diffuse erythema

Laboratory

- Characteristic histopathology on biopsy
- HPV detection and typing.

Management

Indications for therapy

- Symptomatic balanoposthitis.

Recommended regimens

- 5-Fluorouracil cream once/twice weekly
- Podophyllotoxin 0.15% cream twice daily for 3 days per week
- Treatment dependent on availability.

Management of partners

Not strictly necessary, although screening for other STI would be advisable. The patient should be informed of the risk of transmission of HPV to partner(s) and barrier protection discussed.

Follow-up

Assess response to therapy at 1 month. Further follow up only required if symptoms do not resolve, or other STI suspected.

LICHEN SCLEROSUS**Diagnosis***Clinical*

- Typical appearance: white plaques on the glans, often with involvement of the prepuce. There may be haemorrhagic vesicles, and rarely blisters and ulceration. The prepuce may become phimotic, and the meatus may be thickened and narrowed.

Laboratory

- Biopsy: this initially shows a thickened epidermis which then becomes atrophic with follicular hyperkeratosis. This overlies oedema and loss of the elastin fibres, with an underlying perivascular lymphocytic infiltrate. Biopsy is the definitive diagnostic procedure.

Management*Indications for therapy*

- Symptomatic balanoposthitis
- Thickening of the skin on the glans or prepuce.

Recommended regimens

- Potent topical steroids⁷ (e.g. clobetasol propionate or betamethasone valerate) applied once daily until remission, then gradually reduced. Intermittent use (e.g. once a week) may be required to maintain remission.

Alternative regimens

Procedures may be required for specific complications, but treatment of the underlying skin disease will still be required.

- Circumcision if phimosis develops
- Meatotomy for meatal stenosis.

Management of partners

Not required.

Follow up

Patients requiring potent topical steroids for disease control should be followed up regularly.

The frequency of follow up will depend on the disease activity and symptoms of the patient, but all patients should be reviewed by a doctor at least annually in view of the small risk (less than 1%) of malignant transformation⁸.

In addition, patients should be advised to contact the general practitioner or clinic if the appearance changes.

ZOON'S (PLASMA CELL) BALANITIS**Diagnosis***Clinical*

- Typical appearance: well-circumscribed orange-red glazed areas on the glans with multiple pin-point redder spots, 'cayenne pepper spots'. This may be similar to erythroplasia of Queyrat, which is premalignant, and biopsy is advisable
- Patient usually over 30 years.

Laboratory

- Biopsy: epidermal atrophy, loss of rete ridges, lozenge keratinocytes and spongiosis, together with a predominantly plasma cell infiltrate subepidermally.

Management*Indications for therapy*

- Symptomatic balanitis.

Recommended regimens

- Topical steroid preparations, with or without added antibacterial agents, e.g. Trimovate (clobetasone butyrate, oxytetracycline and nystatin) cream, applied once or twice a day⁹.

Alternative regimens

- Circumcision: this has been reported to lead to the resolution of lesions¹⁰
- CO₂ laser: this has been used to treat individual lesions¹¹—no clear evidence on equivalence.

Management of partners

Not required.

Follow up

- Dependent on clinical course and treatment used, especially if topical steroids are being used long term
- In cases of diagnostic uncertainty penile biopsy should be performed prior to discontinuing follow up, to exclude erythroplasia of Queyrat.

ERYTHROPLASIA OF QUEYRAT**Diagnosis***Clinical*

- Typical appearance: red, velvety, well-circumscribed area on the glans. May have raised white areas, but if indurated suggests frank squamous cell carcinoma.

Laboratory

- Biopsy: essential—squamous carcinoma *in situ*.

Management*Indications for therapy*

- Presence of lesion.

Recommended regimen

- Surgical excision: local excision is usually adequate and effective¹².

Alternative regimens

- | | | |
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| <ul style="list-style-type: none"> • Fluorouracil cream 5%¹³ • Laser resection¹¹ • Cryotherapy¹⁴ | } | Equivalent |
|--|---|------------|

Management of partners

Not required.

Follow up

Obligatory because of the possibility of recurrence. Minimum of annual appointments.

Auditable outcome measure

One hundred per cent of patients should have a biopsy.

CIRCINATE BALANITIS**Diagnosis***Clinical*

- Typical appearance: greyish-white areas on the glans which coalesce to form 'geographical' areas with a white margin. It may be associated with other features of Reiter's syndrome but can occur without.

Laboratory

- Biopsy: spongiform pustules in the upper epidermis, similar to pustular psoriasis
- Screening for STIs especially *C. trachomatis*.

Management*Indications for therapy*

- Symptomatic balanitis.

Recommended regimen

- Hydrocortisone cream 1% (or occasionally more potent topical steroids) for symptomatic balanitis⁹
- Treatment of any underlying infection.

Management of partners

If an STI is diagnosed the partner(s) should be treated as per the appropriate protocol.

Follow up

Required if persistent symptoms and/or associated STI.

FIXED DRUG ERUPTIONS**Diagnosis***Clinical*

- Typical appearance: variable but lesions are usually well-demarcated and erythematous, but can be bullous with subsequent ulceration
- History: a careful drug history is essential, as is a history of previous reactions. Common precipitants include tetracyclines, salicylates, phenacetin, phenolphthalein and some hypnotics
- Examine the oral and ocular mucosa
- Rechallenge: this can confirm the diagnosis.

Management*Indications for therapy*

- Symptomatic lesions.

Recommended regimen

- Topical steroids, e.g. 1% hydrocortisone applied twice a day until resolution¹⁵.

Alternative regimen

- Systemic steroids may be required if the lesions are severe.

Management of partners

Not required.

Follow up

Not required after resolution. Patients should be advised to avoid the precipitant.

IRRITANT/ALLERGIC BALANITIDES**Diagnosis***Clinical*

- Typical appearance: very variable. Appearances range from mild erythema to wide-spread oedema of the penis

- History: symptoms have been associated with a history of atopy or more frequent genital washing with soap. In a very small number of cases a history of a precipitant may be obtained
- Patch tests: useful in the small minority in whom true allergy is suspected.

Laboratory

- Biopsy: may show non-specific inflammation.

Management

Indications for therapy

- Symptomatic balanoposthitis.

Recommended regimen

- Avoidance of precipitants, especially soaps¹⁶
- Emollients—aqueous cream: applied as required and used as a soap substitute¹⁵
- Hydrocortisone 1% applied once or twice a day until resolution of symptoms.

All the above should be used in combination.

Management of partners

Not required.

Follow up

Not required, although recurrent problems are common and the patients need to be informed of this.

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