

Chapter 10

NONULCERATIVE GENITAL LESIONS

Cutaneous genital lesions can, in general, be classified as ulcerative or nonulcerative. Nonulcerative genital lesions are often caused by sexually transmitted infections such as scabies, human papillomavirus (HPV), and molluscum contagiosum. *Candida albicans* and other fungi, such as dermatophytes, also cause genital skin lesions. However, many nonvenereal dermatologic conditions can also involve the genitalia. In order to effectively treat the patient and control transmission of infections, the clinician must accurately distinguish one type of lesion from another.

Characteristics of the most common nonulcerative genital skin lesions are presented in Table 10-1. A careful medical history should include questions about systemic disease, family history, and use of systemic or local drugs.

Among the most important features to consider in distinguishing various nonulcerative skin lesions of the genitalia are:

1. the appearance and distribution of the lesions,
2. whether lesions are seen in nongenital areas,
3. whether the lesion is pruritic or nonpruritic, and
4. the duration of the lesions.

Diagnostic tests, where available, should be done as indicated in Table 10-1. Response to therapy sometimes must be used as a means of establishing the diagnosis.

ANOGENITAL WARTS (CONDYLOMATA ACUMINATA)

Diagnosis

The typical “cauliflower” lesions of genital warts usually involve the external genitals, perineum, or perianal area. “Flat” condylomata of the cervix are documented by colposcopy or cervical cytology.

Treatment

The goal of therapy for genital warts is to reduce the amount of HPV and improve the cosmetic appearance. In general, topical therapies (liquid nitrogen, podophyllin, podophyllotoxin, imiquimod and trichloroacetic acid) are associated with 60 to 80% response rates and approximately 30% will have a recurrence due to persistent HPV. Patients need to be counseled about realistic expectations for treatment efficacy. Laser therapy and surgical excision can be considered for extensive warts.



Rectal condyloma accuminata (HPV infection) [37]



Condylomata accuminata (warts) [38]

TABLE 10-1**COMMON NONULCERATIVE GENITAL SKIN LESIONS – Venereal**

Disease	Appearance	Genital Distribution	Itching	Time Course	Diagnostic Test	Treatment	Other
SCABIES	Red, linear, excoriated areas, often with papules, pustules, and burrows	External genitalia, often on finger webs, thighs, lower abdomen, buttocks	Marked, often worse at night or in a warm room	Days	Demonstration of mite in burrow on skin scraping	Gamma benzene hexachloride 1% solution; 5% permethrin	Launder sheets and clothes; treat other sex partners or household contacts simultaneously
PEDICULOSIS PUBIS	Lice or nits on pubic hair; irritated reddish skin underneath	Pubic hair	Marked	Days	Demonstration of lice or nits	As for scabies; 1% permethrin, gamma benzene, hexachloride	As for scabies
GENITAL WARTS (HPV)	Ranges from flat-topped to verrucous, to frond-like, elevated, well-demarcated lesions	Around glans, distal penis; intraurethral in men; introitus and vagina in women; perirectal	Mild or none	Weeks to months	None	Podophyllin, liquid nitrogen, resection, laser surgery	May recur if not treated adequately
CANDIDA	Flat, reddish-brown, well demarcated, slightly scaly lesions; often satellite lesions	Glans and under foreskin in men; vulva in women; occasional perirectal lesions	Moderate to marked	Days	KOH prep shows budding yeasts and pseudohyphae	Clotrimazole or miconazole, fluconazole	Partner should be treated if symptomatic
MOLLUSCUM CONTAGIOSUM	Pearly-white papular, smooth-surfaced umbilicated papules	Anywhere on genitalia	Minimal	Weeks	None; may be able to express a discharge from the central core	Curettage, liquid nitrogen, electrodesiccation, keratolytic paints	Often become superinfected, particularly if manipulated; often multiple lesions in genital and nongenital areas. STD exam of contacts
SECONDARY SYPHILIS*	Condyloma lata (moist, red, raised wheal-like lesions) or mucous patches (reddish ulcers with a violaceous border)	Vagina, vulva, penis, scrotum, perirectal area	Minimal	Weeks	Positive VDRL with confirmatory MHA or FTA and darkfield	Benzathine penicillin G 2.4 million units IM in a single dose	Evaluation and treatment of sexual partners critical

* Obtain RPR for all patients with atypical warts or undiagnosed rash.

TABLE 10-1**COMMON NONULCERATIVE GENITAL SKIN LESIONS –
Non-Venereal**

Disease	Appearance	Genital Distribution	Itching	Time Course	Diagnostic Test	Treatment	Other
LICHEN PLANUS	Annular, polygonal, flat-topped, violaceous lesion; mild scaling	Single or multiple, usually on penile shaft or glans	Mild to moderate	Days	Biopsy	Symptomatic topical steroids may be beneficial	History of previous similar lesions; lesion on non-genital area
PSORIASIS	Well-demarcated papulosquamous plaques with silver scale; usually bleeds if scale removed	Penile shaft, scrotum, perirectal	Moderate	Days to weeks, may wax and wane	None	Dependent upon severity of disease; refer to dermatologist	Usually has psoriatic lesions elsewhere (elbows, knees, lower back); history of episodic lesions; may have pitted nails
FIXED DRUG ERUPTION	Erythematous, well-demarcated "burn-like" area, may evolve from erythema to vesicles or blebs	Any part of genitalia, but glans and penile shaft most common in men; labia in women	Moderate	Days, sudden onset	None	None, or topical steroids in severe cases. Avoid drug usage.	Often hx of previous similar reaction in same location; may have nongenital lesions; hx of new drug within 10 d of onset; usually recurrences occur with taking the drug; most common with sulfa, barbiturates, tetracycline
SUPERFICIAL MYCOSES	Brawny red; well-marginated, often scaling	Medial thighs, scrotum, in gluteal folds, usually symmetrical	Moderate to marked	Weeks	KOH prep, culture	Topical tinactin, miconazole, or oral azole	Often foot lesions also; worse in hot, humid weather or under occlusive clothing
DEEP MYCOSES	Sharply marginated, indurated, often raised, irregular, verrucous lesions; may ulcerate	Scrotum and penile shaft in men; external genital lesions rare in women	Minimal	Weeks, months	KOH test, culture, biopsy	Dependent upon type of fungus	May have nongenital skin lesions or visceral lesions also
CARCINOMA	Sharply demarcated, variegated, firm, raised, irregular	Any part of external genitalia	Minimal	Weeks to months	Biopsy	Dependent upon type of carcinoma, usually surgical	May have firm, hard, regional lymph nodes; may have systemic signs of weight loss, weakness, etc.
REITER'S SYNDROME	Multiple inflamed, tender, elevated, moist papules	Lesions characteristically around the glans penis; circinate balanitis	Moderate	Days	None	Same as psoriasis	May be associated with arthritis, conjunctivitis, and pustular or hyperkeratotic skin lesions on the soles of the feet
TRAUMA	Superficial abrasion	Areas of friction or trauma	Mild	Days	None	None	Prevent bacterial superinfection

External genital warts, recommended treatments

For a more detailed discussion of these regimens and other treatment considerations, please refer to the CDC STD Treatment Guidelines at <http://www.cdc.gov/std/treatment/>.

Patient-applied

Either of the following:

- Podofilox 0.5% solution or gel. Patients may apply podofilox solution with a cotton swab, or podofilox gel with a finger, to visible genital warts twice a day for 3 days, followed by 4 days of no therapy. This cycle may be repeated as necessary for a total of four cycles. The total wart area treated should not exceed 10 cm², and a total volume of podofilox should not exceed 0.5 mL per day. If possible, the health-care provider should apply the initial treatment to demonstrate the proper application technique and identify which warts should be treated. The safety of podofilox during pregnancy has not been established.
- Imiquimod 5% cream. Patients should apply imiquimod cream with a finger at bedtime, three times a week for as long as 16 weeks. The treatment area should be washed with mild soap and water 6-10 hours after the application. Some experts recommend the use of daily applications in men with warts on dry areas of skin. The safety of imiquimod during pregnancy has not been established.

Provider-administered

Any of the following:

- Cryotherapy with liquid nitrogen or cryoprobe. Freeze each lesion twice for 10 to 15 seconds. Vary the length of freezing in future treatments based on the individual's therapeutic response. Allow time for thawing between each application. Repeat applications every 1 to 2 weeks. Usually requires at least 3 to 4 weekly or biweekly treatments.
- Podophyllin resin 10-25% in compound tincture of benzoin. A small amount should be applied to each wart and allowed to air dry. To avoid the possibility of complications associated with systemic absorption and toxicity, some experts recommend that application be limited to ≤ 0.5 mL of podophyllin or ≤ 0.10 cm² of warts per session. Some experts suggest that the preparation should be thoroughly washed off 1-4 hours after application to reduce local irritation. Repeat weekly if necessary. The safety of podophyllin during pregnancy has not been established.
- TCA or BCA 80-90%. Apply a small amount only to warts and allow to dry, at which time a white "frosting" develops; powder with talc, sodium bicarbonate (i.e., baking soda), liquid soap preparations to remove unreacted acid if an excess amount is applied. Repeat weekly if necessary.
- Surgical removal either by tangential scissor excision, tangential shave excision, curettage, or electrosurgery.

External genital warts, alternative treatments

Either of the following:

- Intralesional Interferon
- Laser Surgery

Vaginal or cervical warts

Women with vaginal or cervical warts should have a Pap smear and should be examined by an

experienced colposcopist. Treatment of vaginal or cervical warts is complicated and should be carried out in consultation with an expert.

Current therapies include:

- Cryotherapy with liquid nitrogen. The use of a cryoprobe in the vagina is not recommended because of the risk for vaginal perforation and fistula formation.
- TCA or BCA 80-90% applied only to warts. Apply a small amount only to warts and allow to dry, at which time a white “frosting” develops; powder with talc or sodium bicarbonate (i.e., baking soda) to remove unreacted acid if an excess amount is applied. Repeat weekly if necessary.

Urethral meatal warts

Small warts (4 mm) which can be visualized in their entirety (i.e., mucosal attachment clearly visible).

Current therapies include:

- Cryotherapy with liquid nitrogen
- Podophyllin 10-25% in compound tincture of benzoin. The treatment area must be dry before contact with normal mucosa. Repeat weekly if necessary. The safety of podophyllin during pregnancy has not been established.
- Podofilox 0.5% solution or gel. Patients may apply podofilox solution with a cotton swab, or podofilox gel with a finger, to visible genital warts twice a day for 3 days, followed by 4 days of no therapy. This cycle may be repeated as necessary for a total of four cycles. If possible, the health-care provider should apply the initial treatment to demonstrate the proper application technique and identify which warts should be treated.
- Imiquimod 5% cream. Patients should apply imiquimod cream with a finger at bedtime, three times a week for as long as 16 weeks. The treatment area should be washed with mild soap and water 6-10 hours after the application.

Anal warts

Any of the following:

- Cryotherapy with liquid nitrogen
- TCA or BCA 80-90% applied to warts. Apply a small amount only to warts and allow to dry, at which time a white “frosting” develops; powder with talc or sodium bicarbonate (i.e., baking soda) to remove unreacted acid if an excess amount is applied. Repeat weekly if necessary.
- Surgical removal.
- Note: Management of warts on rectal mucosa should be referred to an expert.

Oral warts

Either of the following:

- Cryotherapy with liquid nitrogen.
- Surgical removal.

Follow-up

Retreat once or twice weekly until visible warts resolved.

- Vulvar or perianal warts: Internal reexamination (vaginal speculum or anoscope) should be done at all follow-up treatments.
- Extensive warts, “flat” cervical condylomata (including wart diagnosis by Pap smear), and warts not responding to the above measures over 3 to 4 weeks: Refer to an appropriate specialist (gynecologist, dermatologist, proctologist, or urologist) for possible surgical excision, CO₂ laser therapy, or other treatment.

Management of contacts

- Routine STD examination for all contacts, including cervical cytology for female partners.
- Condom use is advisable; however, some patients in stable monogamous relationships choose not to use condoms.

Sequelae

Multiple HPV types, including 16 and 18, as well as types 31, 33, and 35 have been associated with cervical and anal dysplasia and carcinomas.

MOLLUSCUM CONTAGIOSUM

Diagnosis

Typical firm, small (1-5 mm), pink fleshy papules, often umbilicated; firm white “pearl” expressed on compression, usually followed by brisk bleeding .

Treatment

For a more detailed discussion of these regimens and other treatment considerations, please refer to the CDC STD Treatment Guidelines at <http://www.cdc.gov/std/treatment/>.

- Unroof lesions with a needle.
- Express the central material.
- Liquid nitrogen therapy may be effective for small lesions.

Follow-up

- PRN for recurrences

Management of contacts

- Routine STD examination

PEDICULOSIS PUBIS

Diagnosis

Typical *Phthirus pubis* organisms or their nits are found usually in pubic hair; they may be seen on hairs of the thighs, trunk, eyelashes, eyebrows, and scalp occasionally.



Lesions of molluscum contagiosum [39]

Treatment

For a more detailed discussion of these regimens and other treatment considerations, please refer to the CDC STD Treatment Guidelines at <http://www.cdc.gov/std/treatment/>.

Any of the following:

- Permethrin 1% creme rinse applied to affected areas and washed off after 10 minutes.
- Lindane 1% shampoo applied for 4 minutes to the affected area and then thoroughly washed off. This regimen is not recommended for pregnant or lactating women or for children ages <2 years.
- Pyrethrins with piperonyl butoxide applied to the affected area and washed off after 10 minutes.

Follow-up

- PRN for recurrences

Management of contacts

- Routine STD examination
- Treat all regular sexual partners and other household members.

SCABIES

Diagnosis Clinical

Intensely pruritic papular or excoriated erythematous skin lesions which are occasionally serpiginous are seen clinically. The predominant sites classically include finger webs, wrists, elbows, axillary folds, the trunk (especially at the belt line), gluteal folds, and inguinal areas, but any site may be involved, including the penis, scrotum, and labia majora. Atypical lesions and locations occur frequently.

Laboratory

- Obtain scrapings of a “fresh” papule by excoriating the lesions with a scalpel blade, attempting to avoid causing the papule to bleed.
- Transfer the scraping to a slide.
- Apply a drop of oil and a coverslip.
- Examine microscopically.

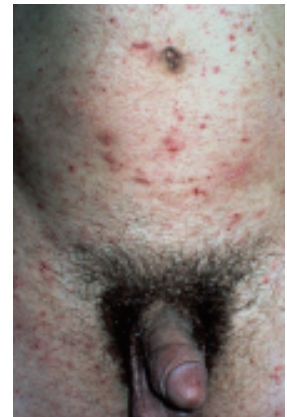
Demonstration of the scabies mite or typical fecal pellets confirms the diagnosis.

Treatment

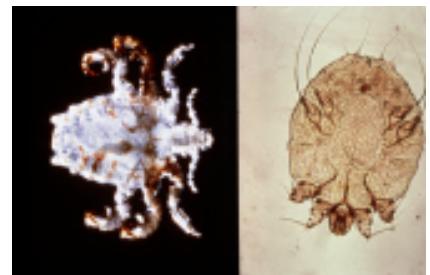
For a more detailed discussion of these regimens and other treatment considerations, please refer to the CDC STD Treatment Guidelines at <http://www.cdc.gov/std/treatment/>.

Recommended regimen

- Permethrin cream (5%) applied to all areas of the body from the neck down and washed off after 8-14 hours.



Rash due to scabies infestation [40]



Sarcoptes scabiei and *Phthirus pubis*, each in an oil prep slide [41]

Alternative regimens

Either of the following:

- Lindane (1%) 1 oz. of lotion or 30 g of cream applied thinly to all areas of the body from the neck down and thoroughly washed off after 8 hours.
- Ivermectin in two doses of (200 ug/kg) separated by two weeks.

Consider a second application after 4 to 5 days for particularly heavy infestations.

Launder clothes, bed sheets, etc.

Follow-up

- PRN for recurrences

Management of contacts

- Routine STD examination
- Treat all regular sexual partners and other household members.