FIGURE 163-6 **Genital herpes.** A relatively mild, superficial ulcer is typically seen in episodic outbreaks. *(Courtesy of Michael Remington, University of Washington Virology Research Clinic.)*

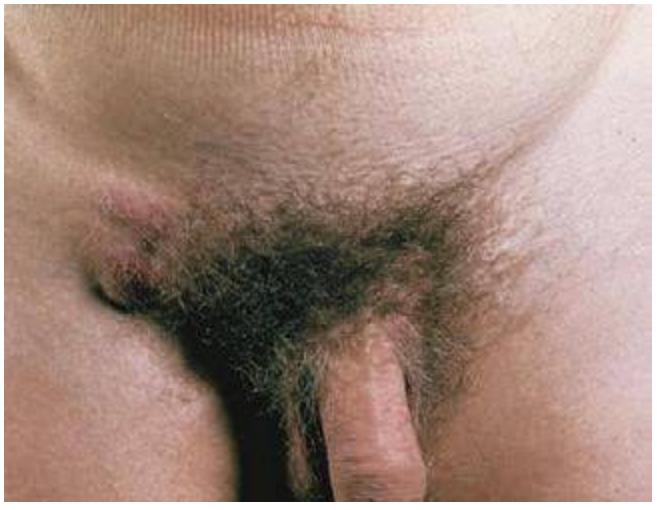

FIGURE 163-7 **Lymphogranuloma venereum (LGV):** striking tender lymphadenopathy occurring at the femoral and inguinal lymph nodes, separated by a groove made by Poupart's ligament. This "sign-of-the-groove" is not considered specific for LGV; for example, lymphomas may present with this sign.

TABLE 163-8 INITIAL MANAGEMENT OF GENITAL OR PERIANAL ULCER

Causative Pathogens
Herpes simplex virus (HSV)
Treponema pallidum (primary syphilis)
Haemophilus ducreyi (chancroid)
Usual Initial Laboratory Evaluation
Dark-field exam (if available), direct FA, or PCR for *T. pallidum*
RPR, VDRL, or EIA serologic test for syphilis[a]
Culture, direct FA, ELISA, or PCR for HSV
HSV-2-specific serology (consider)
In chancroid-endemic area: PCR or culture for *H. ducreyi*
Initial Treatment
Herpes confirmed or suspected (history or sign of vesicles):
Treat for genital herpes with acyclovir, valacyclovir, or famciclovir.
Syphilis confirmed (dark-field, FA, or PCR showing *T. pallidum*, or RPR reactive):
Benzathine penicillin (2.4 million units IM once to patient, to recent [e.g., within 3 months] seronegative partner[s], and to all seropositive partners)[b]
Chancroid confirmed or suspected (diagnostic test positive, or HSV and syphilis excluded, and persistent lesion):
Ciprofloxacin (500 mg PO as single dose) *or*
Ceftriaxone (250 mg IM as single dose) *or*
Azithromycin (1 g PO as single dose)

[a]If results are negative but primary syphilis is suspected, treat presumptively when indicated by epidemiologic and sexual risk assessment; repeat in 1 week. [b]The same treatment regimen is also effective in HIV-infected persons with early syphilis.

Abbreviations: EIA, enzyme immunoassay; ELISA, enzyme-linked immunosorbent assay; FA, fluorescent antibody; HSV, herpes simplex virus; PCR, polymerase chain reaction; RPR, rapid plasma reagin; VDRL, Venereal Disease Research Laboratory.

and epidemiologic considerations can usually guide initial management (Table 163-8) pending results of specific tests. Clinicians should order a rapid serologic test for syphilis in all cases of genital ulcer. To evaluate lesions except those highly characteristic of infection with HSV (i.e., those with herpetic vesicles), dark-field microscopy, direct immunofluorescence, and PCR for *T. pallidum* can be useful but are rarely available today in most countries. It is important to note that 30% of syphilitic chancres—the primary ulcer of syphilis—are associated with an initially nonreactive syphilis serology. All patients presenting with genital ulceration should be counseled and tested for HIV infection.

Typical vesicles or pustules or a cluster of painful ulcers preceded by vesiculopustular lesions suggests genital herpes. These typical clinical manifestations make detection of the virus optional; however, many patients want confirmation of the diagnosis, and differentiation of

TABLE 163-7 CLINICAL FEATURES OF GENITAL ULCERS

Feature	Syphilis	Herpes	Chancroid	Lymphogranuloma Venereum	Donovanosis
Incubation period	9–90 days	2–7 days	1–14 days	3 days–6 weeks	1–4 weeks (up to 6 months)
Early primary lesions	Papule	Vesicle	Pustule	Papule, pustule, or vesicle	Papule
No. of lesions	Usually one	Multiple	Usually multiple, may coalesce	Usually one; often not detected, despite lymphadenopathy	Variable
Diameter	5–15 mm	1–2 mm	Variable	2–10 mm	Variable
Edges	Sharply demarcated, elevated, round, or oval	Erythematous	Undermined, ragged, irregular	Elevated, round, or oval	Elevated, irregular
Depth	Superficial or deep	Superficial	Excavated	Superficial or deep	Elevated
Base	Smooth, nonpurulent, relatively nonvascular	Serous, erythematous, nonvascular	Purulent, bleeds easily	Variable, nonvascular	Red and velvety, bleeds readily
Induration	Firm	None	Soft	Occasionally firm	Firm
Pain	Uncommon	Frequently tender	Usually very tender	Variable	Uncommon
Lymphadenopathy	Firm, nontender, bilateral	Firm, tender, often bilateral with initial episode	Tender, may suppurate, loculated, usually unilateral	Tender, may suppurate, loculated, usually unilateral	None; pseudobuboes

Source: From RM Ballard, in KK Holmes et al (eds): *Sexually Transmitted Diseases*, 4th ed. New York, McGraw-Hill, 2008.