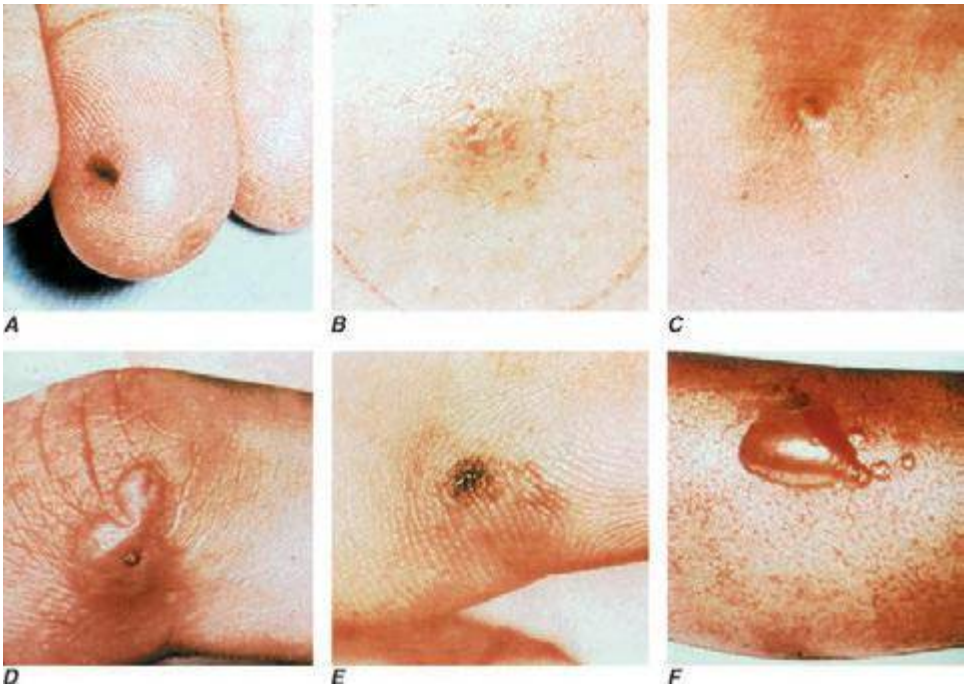

FIGURE 181-2 Characteristic skin lesions in patients with proven gonococcal bacteremia. The lesions are in various stages of evolution. ***A.*** Very early petechia on finger. ***B.*** Early papular lesion, 7 mm in diameter, on lower leg. ***C.*** Pustule with central eschar resulting from early petechial lesion. ***D.*** Pustular lesion on finger. ***E.*** Mature lesion with central necrosis (black) on hemorrhagic base. ***F.*** Bullae on anterior tibial surface. *(Reprinted with permission from KK Holmes et al: Disseminated gonococcal infection. Ann Intern Med 74:979, 1971.)*

several well-controlled studies, mainly in Kenya and Zaire. The nonulcerative STIs enhance the transmission of HIV by three- to fivefold; transmission of HIV-infected immune cells and increased viral shedding by persons with urethritis or cervicitis may contribute (Chap. 226). HIV has been detected by polymerase chain reaction (PCR) more commonly in ejaculates from HIV-positive men with gonococcal urethritis than in those from HIV-positive men with nongonococcal urethritis. PCR positivity diminishes by twofold after appropriate therapy for urethritis. Not only does gonorrhea enhance the transmission of HIV, but it may also increase the individual's risk for acquisition of HIV. A proposed mechanism is the significantly greater number of CD4+ T lymphocytes and dendritic cells that can be infected by HIV in endocervical secretions from women with nonulcerative STIs than in those from women with ulcerative STIs.

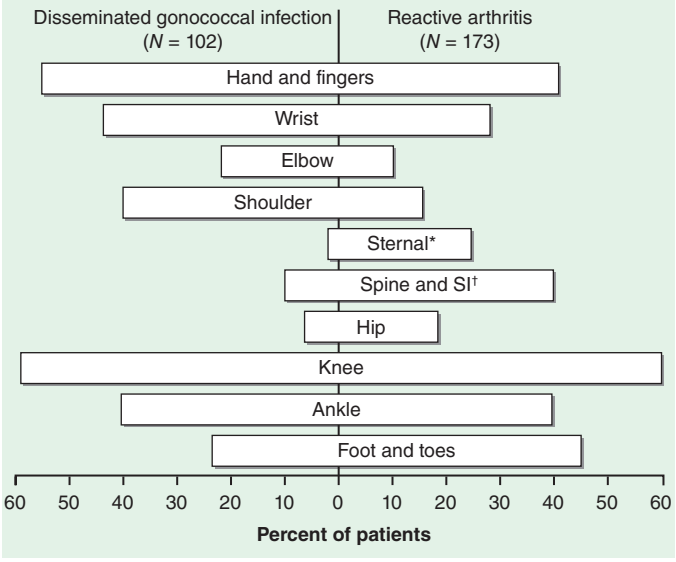

FIGURE 181-3 Distribution of joints with arthritis in 102 patients with disseminated gonococcal infection and 173 patients with reactive arthritis. *Includes the sternoclavicular joints. †SI, sacroiliac joint.

LABORATORY DIAGNOSIS

A rapid diagnosis of gonococcal infection in men may be obtained by Gram's staining of urethral exudates (Fig. 181-1). The detection of gram-negative intracellular monococci and diplococci is usually highly specific and sensitive in diagnosing gonococcal urethritis in symptomatic males but is only ~50% sensitive in diagnosing gonococcal cervicitis. Samples should be collected with Dacron or rayon swabs. Part of the sample should be inoculated onto a plate of modified Thayer-Martin or other gonococcal selective medium for culture. It is important to process all samples immediately because gonococci do not tolerate drying. If plates cannot be incubated immediately, they can be held safely for several hours at room temperature in candle extinction jars prior to incubation. If processing is to occur within 6 h, transport of specimens may be facilitated by the use of nonnutritive swab transport systems such as Stuart or Amies medium. For longer holding periods (e.g., when specimens for culture are to be mailed), culture media with self-contained CO_2-generating systems (such as the JEMBEC or Gono-Pak systems) may be used. Specimens should also be obtained for the diagnosis of chlamydial infection (Chap. 213).

PMNs are often seen in the endocervix on a Gram's stain, and an abnormally increased number (≥30 PMNs per field in five 1000× oil-immersion microscopic fields) establishes the presence of an inflammatory discharge. Unfortunately, the presence or absence of gram-negative intracellular monococci or diplococci in cervical smears does not accurately predict which patients have gonorrhea, and the diagnosis in this setting should be made by culture or another suitable nonculture diagnostic method. The sensitivity of a single endocervical culture is ~80–90%. If a history of rectal sex is elicited, a rectal wall swab (uncontaminated with feces) should be cultured. A presumptive diagnosis of gonorrhea cannot be made on the basis of gram-negative diplococci in smears from the pharynx, where other *Neisseria* species are components of the normal flora.

Increasingly, nucleic acid probe tests are being substituted for culture for the direct detection of *N. gonorrhoeae* in urogenital