The US has the highest rate of sexually transmitted infections (STI) in the world, with 20 million such infections occurring each year, according to the Centers for Disease Control and Prevention. Half of those occur in people younger than 24. While it is natural to think about STIs affecting the genitals, numerous STIs present on the skin—which means dermatologists are often on the front lines of treating these highly common infections.

HUMAN PAPILLOMAVIRUS (HPV)
HPV is the most common STI in the United States. In fact, most sexually active individuals will be infected at some point in their lives. Most of these infections are cleared spontaneously, but some will progress to form genital warts or cancers. Dermatologists should biopsy lesions that do not respond to standard treatment. In addition to the anogenital area, lesions can develop in other parts of the body, including the mouth and throat. Although the HPV strains that cause genital warts are typically different from those that cause cancers, dermatologists should advise patients and/or their partners to receive routine cervical cancer screening. Dermatologists should also consider advising both male and female patients in the appropriate age range to receive the Gardasil or Cervarix vaccines.

GENITAL ULCERS AND SORES
The most common STIs that cause ulceration in the anogenital area are herpes simplex virus (HSV) and primary syphilis. Since many cases do not have classic presentations and more than one etiological agent can be present in an ulcer, lesions should be tested for both HSV and syphilis. Other less common causes including chancroid and granuloma inguinale should be considered in prevalent areas. Again, lesions can also develop in other parts of the body, including the oral area, breasts, and hands. However, it is important to remember that not all genital ulcers are caused by sexual transmission. In adolescent females, reactive and recurrent genital ulcers can occur following a variety of stimuli including systemic illnesses, Epstein Barr Virus infection, etc. This diagnosis should be considered in patients where STIs have been ruled out.

SYphilis
Although the transmission of syphilis has decreased dramatically since penicillin became available in the 1940s, rates have been on the rise in recent years. Known as the “great imitator,” this disease can affect numerous organ systems. Dermatologists should be aware of the myriad presentations of secondary and tertiary syphilis on the skin, especially in susceptible populations. The eruption of secondary syphilis can be macular, papular or polymorphous, limited or widespread. The involvement of the palms and soles is an important clue. Other signs include condyloma lata, “moth-eaten” alopecia, and mucous patches. Tertiary cutaneous syphilis, although less common, can present as nodular eruptions and gummas. Given the wide variety of appearances, a high index of suspicion is necessary.

GONORRHEA AND CHLAMYDIA
Although infectious urethritis and cervicitis are not primarily treated by dermatologists, we should be familiar with extra-genital cutaneous manifestations of gonorrhea and chlamydia. Focal gonococcal infections can present as grouped pustules resembling HSV, and the eye and pharynx can also be affected. Patients with disseminated gonococcemia are systemically ill and can have hemorrhagic vesicles and pustules mainly on the extremities. Certain species of chlamydia can cause lymphogranuloma venereum and conjunctivitis.

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