Editorial

Genital Emergencies for the Dermatologist

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What constitutes an emergency? To me, an emergency is a medical condition that generally arises rather abruptly and is associated with 1 or more symptoms. Moreover, a situation is emergent if timely diagnosis and rapid initiation of therapy make a substantial difference in the ultimate outcome. Finally, emergencies often pose a threat to normal functionality (eg, morbidity) and/or a realistic possibility of death (eg, mortality). Emergencies need to be carefully distinguished from conditions that are important or urgent but are not truly emergent. Important and urgent conditions certainly do merit medical attention but do not carry the potentially grave consequences associated with true emergencies. For example, a fixed drug eruption on the glans penis is important and requires proper investigation to preclude further episodes. However, if it presents by itself, this disorder carries no long-term risk for morbidity or mortality; even without timely diagnosis, an isolated episode of a fixed drug eruption will undergo spontaneous resolution. Another example might be an outbreak of genital herpes. In the typical individual, this painful disorder requires timely intervention to facilitate prompt resolution; therefore, it is best characterized as urgent in nature. Because there is no risk for morbidity or mortality in the immunocompetent patient, it should not objectively be considered an emergency. Of course to the patient who develops a fixed drug eruption or a recurrence of genital herpes, these entities might well be subjectively classified as emergencies.

This brief editorial is designed to remind the practitioner of 3 select true emergencies involving genitalia—Fournier gangrene, penile strangulation, and genital bite wound—as a rule and not as an exception. For example, although calciphylaxis is always considered a life-threatening emergency and has been described as occurring on the genitalia,[1] it is an atypical situation and will not be discussed. In addition, there are many genital emergencies (eg, priapism, testicular torsion, sexual and nonsexual trauma, uterine prolapse) that belong in the urologic or gynecologic sphere and likewise will not be discussed.

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Fournier Gangrene

This life-threatening bacteria-induced necrotizing fasciitis of the anogenital tissue often is polymicrobial in nature with the most common etiologic organisms being *Escherichia coli*, *Pseudomonas aeruginosa*, *Bacteroides fragilis* and related species, *Clostridium* species, and staphylococci including methicillin-resistant *Staphylococcus aureus*.[2,3] It is 10 to 25 times more prevalent in middle-aged to older men than in comparably aged women. An antecedent event may occur, such as local blunt or penetrating trauma, anogenital surgery, invasive instrumentation, urethral stricture, or preexistent perianal disease. Patients who are diabetic; alcoholic; or debilitated, immobilized, or immunocompromised are at especially high risk for development of this disorder.[4] A numerical severity index exists that accurately identifies patients with a poor prognosis at the time of presentation; electrolyte abnormalities, anemia, degree of leukocytosis, tachycardia, and tachypnea contribute to this well-validated scoring system.[5]

Initial manifestations of this disorder include localized swelling and pain; followed by some purulence; and ultimately dusky ischemia, necrosis, and sloughing. In men, Fournier gangrene most commonly affects the scrotum, then spreads to the penis, perineum, and abdomen. In women, the disease most often begins on the vulva and spreads to the perineum. Left untreated, sepsis and multiple organ failure ensue, leading to death. Diagnosis is made by visual inspection and finding crepitus in the malodorous involved tissue; plain radiographs, ultrasonography, or computerized tomography typically demonstrate radiolucent gas pockets in the soft tissue.[6]

Treatment of Fournier gangrene consists of aggressive debridement of all necrotic tissues, administration of appropriate antibiotics (determined based on culture results), and meticulous reconstruction of anatomic defects.[7]

Penile Strangulation

In this not uncommon emergency, an object deliberately is placed to circle the penis, which may be done for erotic (prolong erection) or autoerotic (enhance masturbation) purposes.[8] To the individual's surprise, the object subsequently may prove to be impossible to remove. The afflicted individual often delays seeking

medical assistance because of embarrassment, shame, and likely humiliation when a foreign body is revealed.[9]

The encircling object can be metallic (eg, ring, radiator clamp, nut) or nonmetallic (eg, hair, rubber band, string or thread, beer bottle, plastic beverage bottle). Initially, the constricting object causes swelling due to venous and lymphatic obstruction, which eventually leads to arterial occlusion, ischemia, gangrene, and tissue necrosis. The longer the strangulation episode persists, the more severe the consequence. Penile incarceration of 72 hours or more will likely lead to the most severe injury, up to and including penile autoamputation.[8] Interestingly, as strangulation progresses, it often is associated with diminution of penile sensation, which provides a false sense of security to the patient because of a lack of pain.

Treatment consists of emergent removal of the causative object, which can be quite difficult and must be individualized. The method of removal must take into consideration the type of material to be removed, the degree of already existent penile injury, and the availability of suitable tools. Penile aspiration may alleviate swelling and allow easy removal of the constriction. On the other hand, the use of nonelectric (ie, ring or bolt cutter borrowed from a jeweler or plumber) or electric cutting devices (ie, motorized saw or drill borrowed from a dentist, neurosurgeon, fireman, or policeman; cast removal saw) may be necessary. A bone-cutting string-shaped flexible saw (the Gigli saw) also may be helpful.[10] Surgical removal of the penile skin and surgical amputation are reserved for recalcitrant cases.

Following removal of a strangulating object, the penis should undergo complete evaluation by a urologist to assess urethral integrity and any potential neurovascular injury.

Genital Bite Wound

Oral contact with genital skin can result in traumatic injury, attributable to either deliberate actions (playful or aggressive bite) or accidental superficial abrasion by teeth or by dental appliances. In either event, oral flora can be implanted into genital skin, resulting in various lesions. The latter may include inflamed lacerations or ulcerations with the potential to produce severe residual scarring.[11]

Although many of the more than 200 species of microbes found among the oral flora can be pathogenic when inoculated into genital skin, the most dangerous is *Eikenella corrodens*, a fastidious, slow-growing, gram-negative, facultative anaerobic rod.[12] The propensity of this particular organism to cause exceptionally painful and rapidly necrotic ulcers has been well-documented.[11,12] If untreated, this organism also can cause fatal gram-negative sepsis. *Eikenella corrodens* usually is susceptible to penicillin, amoxicillin–clavulanate potassium (treatment of choice), later-generation cephalosporins, trimethoprim-sulfamethoxazole, and ciprofloxacin but resistant to dicloxacillin, nafcillin, first-generation cephalosporins, clindamycin, aminoglycosides, and erythromycin.[13] Thus, if a patient presents with destructive genital ulcerations 24 to 48 hours after orogenital contact with some degree of trauma involved, an appropriate antibiotic should be administered on an emergent basis and debridement should be performed of obviously nonviable tissue.

Conclusion

These 3 disorders illustrate the types of genital emergencies that can and will present to the dermatologist. It is important for physicians practicing cutaneous medicine to be aware of such conditions, be able to deliver initial therapeutic interventions, and be prepared to secure proper multidisciplinary consultation as needed.

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