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The Clinical Picture

Genital lesions and acute urinary retention

A 36-year-old man presents to the emergency department with generalized headache and subjective fevers over the past 3 days and painful vesicular lesions on the scrotum and penis (**FIGURE 1**). He complains of some sensory loss in the perianal region and in the areas of the scrotum and inner thighs. He has not urinated in the past 48 hours and currently has no urge to void.

He is sexually active. Nothing in his medical and surgical history would appear to contribute to his symptoms. He is not taking any medications.

His temperature is 38.5°C (101.3°F). His bladder is distended on palpation and percussion, and he has patches of vesicular and ulcerative lesions on an erythematous base over the scrotum and penis and the proximal inner thighs, lacking a dermatomal pattern. He also has decreased sensation to touch and pain perianally. Anal sphincter tone, deep tendon reflexes, and motor examination of the lower extremities are normal. The patient also lacks any positive meningeal findings. Bladder catheterization yields 1,250 mL of urine.

Q: What is the next step?

- ☐ Urine culture
- ☐ Immunofluorescence for chlamydial infection
- ☐ Cerebrospinal fluid (CSF) analysis
- ☐ Spinal myelography
- ☐ Urine toxicologic screen

A: CSF analysis is a vital diagnostic step in the evaluation of patients who present with skin rash around the genital area and acute urinary retention, to rule out acute sacral myeloradiculitis. In this disease, CSF analysis typically shows an increase in lymphocytes and a mild increase in protein. Urinary tract infection, gonorrhea, central spinal cord compression, and drug intoxication are unlikely to have this presentation. Hence, CSF analysis is the correct answer.

FIGURE 1

The patient undergoes a spinal tap. CSF analysis reveals an elevated white cell count of 85 cells/μL (reference range 0–5), with 79% lymphocytes (reference range 60%–70%), a mildly elevated protein concentration at 80 mg/dL (reference range 15–50), and a normal glucose level. Polymerase chain reaction testing of the CSF is negative for herpes simplex virus (HSV).

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Magnetic resonance images of the brain and spinal cord are normal.

Polymerase chain reaction testing of specimens collected from the genital lesions detects HSV type 2 (HSV-2). Serum Venereal Disease Research Laboratory and serum human immunodeficiency virus tests are negative.

Diagnosis: HSV-2 sacral radiculitis (Elsberg syndrome).

THE PATIENT'S COURSE AND TREATMENT

The patient was initially treated symptomatically by draining the urinary bladder via a Foley catheter, followed by intermittent self-catheterization and topical application of lidocaine cream. He was also given intravenous acyclovir (Zovirax) 10 mg/kg every 8 hours for 2 days, followed by 400 mg orally every 8 hours for 10 days.

By 2 weeks, the skin lesions had resolved, and the patient reported regaining sensation in his anal and sacral areas. He also said he was able to void urine without any difficulty.

ELSBERG SYNDROME

By 2 weeks, the lesions had resolved, and perianal sensation and normal voiding had returned

Elsberg syndrome describes multiple disorders characterized by sacral myeloradiculitis, which can be secondary to viral infection, most commonly HSV type 2.[1,2] CSF analysis and cultures should be performed. However, cultures and HSV studies of the CSF are often negative, as in this patient.[3] CSF lymphocytosis along with a slightly elevated protein level is typical of this disease. It is the latent HSV reactivation in the sacral sensory ganglia that results in sensory neuronal dysfunction and subsequent loss of bladder sensation along with areflexia.

Elsberg syndrome is self-limiting and has a generally good prognosis, but complications such as necrotizing myelitis have been described.[4] The combination of acute urinary retention associated with vesicular skin lesions and sensory nerve dysfunction in the sacral nerve root distribution in a young, sexually active patient is a strong clue to the diagnosis of Elsberg syndrome, a serious but treatable disease.

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