Images in Infectious Diseases

Jarisch-Herxheimer reaction in a patient with syphilis and human immunodeficiency virus infection


A 29-year-old HIV-infected Brazilian man presented syphilis symptoms; infection was detected using Venereal Disease Research Laboratory (VDRL) reagent (1:512). Penicillin 7,200,000 IU (intramuscular) was prescribed as 3 weekly doses of 2,400,000 IU.

Five hours after receiving the first intramuscular penicillin dose, he developed a fever (39.3°C), chills, sweating, headache, and worsening of lesions that manifested as multiple erythematous plaques (Figures A, B). Based on these, he was diagnosed with Jarisch-Herxheimer reaction (JHR). Clinical symptoms disappeared after 24 hours; the lesions regressed within 48 hours (Figure C).

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Jarisch-Herxheimer reaction a febrile inflammatory reaction, frequently occurs after the first chemotherapy dose during spirochetal disease treatment. Its clinical manifestations include fever, sweating, headache, hypotension, and worsening of cutaneous lesions. Many aspects of its etiology are still unknown. It is theorized that spirochete destruction after anti-treponemal treatment could activate a cytokine cascade and release lipoproteins. Penicillin treatment inhibits bacterial cell wall synthesis and makes spirochetes more susceptible to phagocytosis, which then stimulates cytokine release, including tumor necrosis factor and interleukins 6 and 8.

Knowledge about JHR in health professionals is indispensable for differential diagnosis, since JHR may be mistaken for penicillin hypersensitivity.

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Conflict of interest
The authors declare that there is no conflict of interest.

REFERENCES