High Procalcitonin Levels in Patients With Severe Drug Reactions

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though procalcitonin (PCT) serum level is still considered to be a highly specific and sensitive biologic marker of severe bacterial infections, it can be increased in noninfectious situations such as diffuse metastatic solid cancers,1 C-cell carcinoma of the thyroid gland,2 major trauma or surgery,3,4 or after cardiopulmonary bypass.5 Herein we show that PCT level increases in some patients with severe drug reactions. Clinicians should therefore not rely on PCT values to discriminate between infectious and immunoallergic eruptions in patients who present with fever and a rash.

Methods. We investigated 8 consecutive patients with a severe cutaneous drug eruption. Four patients had Stevens-Johnson syndrome (SJS); 2 had drug rash, eosinophilia, and systemic symptoms syndrome (DRESS); 1 had acute generalized exanthematous pustulosis; and 1 had Lyell syndrome. The diagnosis of drug eruption was based on clinical, biologic, and histologic findings. In all cases, investigations including routine biology tests, blood cultures, urinary bacterial examination, pulmonary radiography, and serology failed to identify any bacterial or viral agent.

Results. Procalcitonin levels were significantly elevated in 2 patients, one with DRESS (3.96 µg/L) and the other with SJS (0.53 µg/L). All patients healed within a mean of 25 days (range, 15-45 days) without any antibiotic treatment.

Comment. Our findings suggest that in some patients with severe drug eruptions, PCT level can be elevated in the absence of bacterial infection. Thus, elevated PCT levels neither predict infection in patients with severe drug rashes nor allow discrimination between infectious and noninfectious eruptions.

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References: