

Drug Rash with Eosinophilia and Systemic Symptoms (DRESS) Due to Streptomycin

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Sir,

Streptomycin is frequently used in the treatment of tuberculosis. Cochlear, vestibular and renal toxicity are well-known side effects and cutaneous allergic manifestations are rare. We report here a case of drug rash with eosinophilia and systemic symptoms (DRESS) induced by streptomycin as a previously unrecognized side effect.

CASE REPORT

A 26-year-old Senegalese man was treated with isoniazid, rifampicin, ethambutol and streptomycin for pulmonary tuberculosis. He took no other medicine. On day 45 of treatment he presented a rash with fever at 39°C and spontaneously stopped the treatment. As the eruption persisted he was hospitalized 3 days later. He presented fever at 38°C with morbilliform and itching eruption predominated on the upper part of the body. Clinical examination found tender and generalized superficial lymphadenopathy with painful hepatomegaly. Blood cell count showed hyperleucocytosis at 54900/mm³ with eosinophilia at 21600/mm³. Liver enzymes were elevated at 3×N. A blood smear did not reveal any *plasmodium* but showed 5% of atypical lymphocytes. Blood, urine and cerebrospinal fluid cultures were sterile. ELISA test was negative for HIV 1 and 2. The hepatitis B antigen (HbsAg) was

negative. One day later it was decided to reintroduce progressively the anti-tuberculosis treatment. Streptomycin was first started but already during the drip the cutaneous rash increased with severe itching. Treatment was stopped immediately and replaced by 1 mg kg⁻¹ day⁻¹ of prednisolone. Three days later the fever worsened to 40°C and liver enzymes raised to 6×N. At the same time the patient developed an exfoliative and itching dermatitis with stomatitis. High-potency topical steroids were added to improve cutaneous symptoms. Fifteen days later, as fever and lymphadenopathy had disappeared and liver enzymes dropped to 2×N and eosinophilia to 800/mm³, ethambutol and pyrazinamide were introduced. Rifampicin and isoniazid were re-started 7 and 12 days later. Oral corticosteroids were progressively tapered over 1 month. At 2-month follow-up no clinical or biological relapse was noted.

DISCUSSION

Our patient presented with DRESS as defined by Bocquet et al. in 1996 (1). The symptoms began 45 days after the initiation of treatment for tuberculosis. Fever, lymphadenopathy, morbilliform rash followed by exfoliative dermatitis with stomatitis, hypereosinophilia >1500/mm³, atypical lymphocytes and signs of hepatitis, all supported the diagnosis of DRESS.

Streptomycin was the most probable causative agent. An increase in the cutaneous rash and itching followed by fever and increased hepatic cytolysis as noted promptly after its reintroduction led to permanent removal of streptomycin. No clinical or biological change was noted after reintroduction of the other anti-tuberculosis drugs.

The aromatic anticonvulsants are the most common and classical causes of hypersensitivity syndrome (1). Phenytoin was first described, but hydantoin, carbamazepine and phenobarbital have also been incriminated (1, 2). Among the antibacterials, sulphonamides are the most frequently reported cause of DRESS, but minocycline has also been reported (1). To our knowledge, neither streptomycin nor other aminoglycoside derivatives have been reported to induce DRESS. However, on searching the literature we found a case report of a skin eruption with eosinophilia and liver cytolysis induced by streptomycin in a patient treated for pulmonary tuberculosis (3). This was probably a real case of DRESS induced by streptomycin, but the diagnosis could not be done as the hypersensitivity

syndrome was only well defined one year after this report, in 1993, and the term "DRESS" only proposed in 1996 (1, 4).

We conclude that streptomycin can induce DRESS. Considering the potential gravity of the syndrome, all clinicians who treat tuberculosis must be aware of this side effect.

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