Carbamazepine

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Hypersensitivity syndrome: case report

A carbamazepine-induced hypersensitivity syndrome occurred in a 14-year-old boy, and was also associated with reactivation of human herpesvirus-6 infection and transient hypogammaglobulinaemia.

Seventeen days after carbamazepine 200 mg/day was added to the boy's drug regimen for epilepsy, he developed a fever, then a skin eruption. He was treated with cefaclor for a suspected bacterial infection. However, his symptoms persisted and he developed elevated liver enzyme levels and a decreased platelet count. He was hospitalised for a suspected drug-induced reaction. Carbamazepine and cefaclor were discontinued, but his condition deteriorated further. He was transferred to another hospital and, on admission, he had angioedema of his face and body, generalised lymphadenopathy, mild hepatosplenomegaly and generalised erythema. Laboratory tests also revealed leucocytosis with eosinophilia, an increased number of atypical lymphocytes, increased levels of inflammatory cytokines, elevated liver enzyme levels, blood coagulation abnormalities, transient hypogammaglobulinaemia, and nephritis.

A drug-induced lymphocyte stimulation test on day 29 was positive for carbamazepine, but negative for cefaclor. Carbamazepine-induced hypersensitivity syndrome was diagnosed. The boy was treated with corticosteroids for approximately 5 weeks and his signs and symptoms gradually resolved. At follow-up 14 months after completing corticosteroid therapy, no further hypersensitivity reactions had occurred. Further investigations at this time revealed a reactivation of human herpesvirus-6 infection.

Author comment: "*Some viral infections, particularly those caused by the human herpesvirus (HHV) family, have recently been reported as major precipitating factors*" *in drug-induced hypersensitivity syndrome*.

Aihara Y, et al. Carbamazepine-induced hypersensitivity syndrome associated with transient hypogammaglobulinaemia and reactivation of human herpesvirus 6 infection demonstrated by real-time quantitative polymerase chain reaction. British Journal of Dermatology 149: 165-169, No. 1, Jul 2003 - Japan 800952412