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Mercury toxicity (acrodynia) induced by long-term injection of gammaglobulin

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MOST COMMERCIALY AVAILABLE gammaglobulin preparations contain merthiolate (sodium ethylmercurithiosalicylate), a mercury-containing compound, which serves as a bacteriostatic agent. Thus, patients receiving regular injections of gammaglobulin are potentially at risk for the development of mercury toxicity.

The signs and symptoms of mercury toxicity are varied and depend upon the form of the mercury compound, the length of time of exposure, and individual patient sensitivity.¹ Acrodynia or pink disease is a sensitivity reaction to mercury salts and is characterized by pink, scaling palms and soles, flushed cheeks, pruritus, photophobia,

profuse sweating, irritability, and insomnia.² We report a patient with congenital agammaglobulinemia and receiving gammaglobulin, who developed signs and symptoms of acrodynia.

CASE REPORT

This 20-year-old male with congenital agammaglobulinemia has been receiving gammaglobulin injections (Connaught Laboratories, Toronto, Canada) for approximately 15 years. Although no detectable levels of serum IgA, IgM, or IgE have been demonstrated while on replacement therapy, he has a history of sensitivity reactions involving a rash when exposed to sulfonamide drugs, two episodes of alopecia totalis, rheumatoid-like arthritis, iritis, and a chronic skin rash of undefined nature. He did not have any unusual eating habits, nor was there a history of ingestion of large quantities of fish or other foods known to be a source of mercury. Over the course of the last six months he developed pink, scaling, pruritic palms and soles, flushed cheeks, photophobia, irritability, a fine tremor, and altered sensation in his fingertips. The following investigations were normal or negative: erythrocyte sedimentation rate, white cell count and differential, alkaline phosphatase, SGOT, creatinine phosphokinase, viral cultures, cryoglobulins, cold agglutinins, latex fixation, antinuclear factor, protoporphyrins, total hemolytic complement, C3, and C4. He was found to have a slowed nerve conduction velocity.

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