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Case Report on Dapsone Induced Hypersensitivity Syndrome

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Introduction

An 18year old male, presented to our emergency department with complaints of fever for 2 weeks, cough since 1 week, yellowish discoloration of eyes and non-bilious vomiting since 5 days, facial puffiness and swelling of hands and feet since 3 days. He was apparently normal 6 months back when he first developed multiple hypopigmented lesions starting over his trunk and spreading to his limbs. He was suspected to have Hansen's disease at a local hospital and started on dapsone, rifampicin, clofazimine which he had taken for 15 days and later discontinued because of fever. He has no other chronic diseases or comorbidities. No family history for the same. On general physical examination he was conscious, toxic looking, temperature of 104°F, with multiple oral ulcers and erosions over his lips, bilateral submandibular and cervical lymphadenopathy, icterus, puffiness of face, macular eruptions over his face, neck, trunk and upper part of thighs, admixed with areas of multiple small hypopigmented patches were present. On abdominal palpation tenderness was noted in the right hypochondrium with mild hepatomegaly, which was confirmed on ultrasound along with mild splenomegaly. Laboratory investigations revealed raised serum bilirubin levels (total-4.5, direct-2.2 mg/dl), hemoglobin 7.4g/dl, total WBC count 21,000, neutrophils 68% and reactive atypical lymphocytes, ESR (130mm in 1sthr), serology for viral markers were negative. ECG showed sinus tachycardia. He was started on intravenous antibiotics, antihistamines, intravenous methyl prednisone and other supportive therapy. Symptomatic improvement was

seen in 1week. Desquamation of skin was noted, local emollients and paraffin was applied in those areas. He was discharged with tapering doses of oral prednisone for 8 weeks.

Discussion

Drug Induced Hypersensitivity Syndrome (DIHS) also known as Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) or Drug Induced Delayed Multi-Organ Hypersensitivity Syndrome (DIDMOHS). It is associated with drugs like phenytoin, carbamazepine, sulfonamides, dapsone, abacavir, minocycline, lamotrigine etc. Incidence in India is approximately 1 in 1000 to 1 in 10,000 exposures. It begins with high fever, 1-8 weeks after starting the drug then 1-2 days after which cutaneous exanthematic, erythrodermic or blistering lesions, lymphadenopathy and pharyngitis develops. Fever spikes can last for weeks after discontinuation of drug. Systemic involvement with hepatitis, nephritis, pneumonitis, myocarditis and meningitis develops (1-2 weeks to 1month later). Hematologic manifestations like atypical lymphocytosis, neutrophilia, eosinophilia (>1500/mm3), hemolytic anemia, thrombocytopenia can occur. Others like oral ulcers, delayed onset autoimmune thyroiditis and diabetes can also occur. Inherited genetic defects to metabolize drug intermediates, interaction between drug and viral infections and instability of mixed TH responses are some of the postulated mechanisms.

Management mainly includes discontinuation of inciting drug, antihistamines, and topical corticosteroids. In patients with severe systemic involvement and toxic epidermal necrolysis, prednisone 1-2mg/kg/day or pulse therapy with high dose methyl prednisone was given for long durations.

Reference

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