

CASE REPORT

Rifampicin-induced urticaria in leprosy

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A 28-year-old housewife from Uttar Pradesh, India had suffered from lepromatous leprosy with necrotic erythema nodosum leprosum (ENL) for the last 2 years. Her bacteriological and morphological indices were 4+ and 1%, respectively and a skin biopsy confirmed the diagnosis of lepromatous leprosy with ENL. Her renal, hepatic and haematologic parameters were within normal limits except for haemoglobin of 8 g%. She was started on WHO-MBR (rifampicin, dapsone and clofazimine) and prednisolone 40 mg daily. Within half an hour of the first loading dose the patient developed severe itching over the trunk and extremities followed by urticaria. There was no rhinorrhoea, fever, bronchospasm or hypotension. Urticaria subsided within 4–6 h after administration of an antihistaminic and there was no recurrence of symptom during daily intake of dapsone and clofazimine. Urticaria recurred within 30 min of the 2nd and 3rd loading doses and increased in severity. Urticaria did not recur when rifampicin was omitted from the 4th loading dose onwards. Patient was treated with ofloxacin 400 mg daily for 8 weeks and continued on dapsone and clofazimine. There was no recurrence of urticaria during 2 years follow up.

An open patch test and prick test with rifampicin dissolved in acetone was negative but administration of 300 mg rifampicin under observation lead to the development of itching and urticaria within 30 min.

Discussion

Side-effects of rifampicin are well documented and occur more frequently with intermittent administration especially flu syndrome, shock, shortness of breath, haemolytic anemia and renal failure.^{1–3} Daily and intermittent administration also gives rise to cutaneous and gastrointestinal syndrome, hepatitis and purpura.⁴ Cutaneous syndrome includes itching and flushing of face and it may be associated with rash. Patients may develop hypersensitivity syndrome, Steven's Johnson Syndrome, pemphigus, porphyria cutanea tarda and acneform eruption. Rarely it can induce neutropenia, agranulocytosis; thrombocytopenia, eosinophilia,

psychosis, osteomalacia and adrenal crisis.^{3,5} Recently one patient with impaired blood clotting associated with fever, chills and hypotension has been described with intermittent rifampicin therapy.⁶ There are isolated reports of urticaria and anaphylaxis due to rifampicin in the literature.^{7,8} Type I hypersensitivity especially anaphylaxis is rare with rifampicin therapy and accounted for only 6 out of 30,000 possible allergic reactions to rifampicin. It is more common with intermittent therapy and associated HIV infection.⁹ In a recent study of adverse effects of WHO multidrug therapy for leprosy, hypotension was recorded in 3 and urticaria in 6 cases in a study of 20,667 patients in Sao Paulo, Brazil.¹⁰ It was, however, not clear whether all these were attributable to rifampicin. We have observed only one patient with Type I hypersensitivity after treatment of more than 2500 patients with WHO-MDT over the last 14 years. Cases of shortness of breath described in literature probably are not Type I hypersensitivity as the majority of them occur in association with flu syndrome and may not be associated with wheezing. We believe that this is the first case report of rifampicin-induced urticaria from India. It is possible our patient could have developed more serious symptoms like anaphylaxis but for concurrent administration of 30–40 mg prednisolone throughout the course of illness because of necrotic erythema nodosum leprosum. Prednisolone may have also interfered with results of prick test, provocation was however, positive with rifampicin. The aim of present communication is to re-emphasize to all the clinicians and paramedical workers in remote areas to watch out for rare occurrence of rifampicin-induced urticaria and anaphylaxis.

References

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