Rifampin hypersensitivity in a two year-old child with successful rapid oral desensitization

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A two year, 10 month-old child was referred to a tertiary allergy clinic following an adverse reaction to rifampin. Her mother had isoniazid-resistant pulmonary tuberculosis. The child was born in Canada, was asymptomatic, had a normal chest x-ray and liver enzymes. Mantoux induration was 17 mm. The child was prescribed oral rifampin, 150 mg per day for 3 months. Thirty minutes after ingesting the fifth dose, she developed swelling of the lips, eyes and face; and a pruritic rash to the extremities and face. Anti-histamine was administered: the rash resolved over thirty minutes and facial swelling over 2-3 hours. There were no other IgE-mediated symptoms. Rifampin was discontinued. Past history was negative for atopy, adverse drug reactions, and food allergies.

Intravenous rifampin (600 mg/mL) was used for skin prick and intradermal testing. The patient was admitted to hospital and intravenous access established. Skin prick test results were negative to undiluted rifampin and saline; the histamine response was positive (5 mm). Intradermal testing was performed at 15-minute intervals with dilutions of 1:10,000, 1:1000 and 1:100. The 1:100 dilution test was positive.

Rapid desensitization to oral rifampin was performed over 3.25 hours. The first dose was 1/10,000 of the total dose. Thirteen incremental doses were administered every 15 minutes until a cumulative dose of 151.08 mg had been ingested (Table 1). No adverse events were noted. The child was subsequently continued on a dose of oral rifampin 75 mg twice daily and has not had subsequent reactions.

This case highlights the rare occurrence of rifampin hypersensitivity in a child. Desensitization was motivated by the lack of alternative therapies. Rifampin desensitization protocols previously reported have occurred predominantly in the adult population over several days. We describe a case of rapid oral desensitization to rifampin in a two year-old child.

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