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A trial of proguanil-dapsone in comparison with sulfadoxine-pyrimethamine for the clearance of *Plasmodium falciparum* infections in Tanzania.

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Abstract
Considerable levels of resistance to sulfadoxine-pyrimethamine (SP) have been reported in *Plasmodium falciparum* in north-eastern Tanzania, and the identification of a suitable antimalarial to replace SP is now a high priority. We conducted a trial in July 2000 to determine the efficacy of proguanil (PG) plus dapsone (DS), compared with that of SP, for the treatment of asymptomatic falciparum infection. A total of 220 children with parasitaemia ⩾ 2000 per μL completed the study; 112 had received a single dose of SP (dosage calculated for pyrimethamine 1·25 mg/kg and sulfadoxine 25 mg/kg) and 108 had taken PG 10 mg/kgwith DS 2·5 mg/kg each day for 3 days. Clearance of asexual parasites at day 7 was 14·3% with SP, but 93·5% with PG-DS. The remarkably high failure rate with SP was not associated with occurrence of leucine substitution at position 164 of the *dhfr* gene. Both treatment regimens were well tolerated. Compared with available data on another antifolate combination, chlorproguanil-dapsone (‘Lapdap’), PG-DS was slightly but significantly inferior in achieving parasite clearance (99·5% versus 93·5%). The estimated cost of a 3-day course of PG-DS treatment for a child weighing 18 kg is US $0.15. With the rising incidence of SP-resistant *P. falciparum* infection, PG-DS could provide an effective, affordable and already available therapeutic alternative for malaria in East Africa at least until chlorproguanil-dapsone is registered.

Keywords
Malaria *Plasmodium falciparum* chemotherapy children drug combinations proguanil dapsone sulfadoxine-pyrimethamine Tanzania.