ABSTRACT

Objective: To evaluate whether cotrimoxazole prophylaxis prevents common skin conditions in HIV-infected children.

Design: Open-label randomized controlled trial of continuing versus stopping daily cotrimoxazole (post-hoc analysis).

Setting: Three sites in Uganda, one in Zimbabwe.

Participants: 758 children aged >3 years receiving antiretroviral therapy (ART) for >96 weeks in the ARROW trial were randomized to stop (n=382) or continue (n=376) cotrimoxazole after median(IQR) 2.1(1.8,2.2) years on ART.

Intervention: Continuing versus stopping daily cotrimoxazole.

Main outcome measures: Nurses screened for signs/symptoms at 6-weekly visits. This was a secondary analysis of ARROW trial data, with skin complaints categorized blind to randomization as bacterial, fungal, or viral infections; dermatitis; pruritic papular eruptions (PPE); or other (blisters, desquamation, ulcers, urticaria). Proportions ever reporting each skin complaint were compared across randomized groups using logistic regression.

Results: At randomization, median(IQR) age was 7(4,11) years and CD4 was 33%(26,39); 73% had WHO stage 3/4 disease. Fewer children continuing cotrimoxazole reported bacterial skin infections over median 2 years follow-up (15% versus 33%, respectively; P<0.001), with similar trends for PPE (P=0.06) and other skin complaints (p=0.11), but not for fungal (P=0.45) or viral (P=0.23) infections or dermatitis (P=1.0). Bacterial skin infections were also reported at significantly fewer clinic visits (1.2% vs 3.0%, P<0.001). Independent of cotrimoxazole, bacterial skin infections were more common in children aged 6-8 years, with current CD4<500 cells/mm³, WHO stage 3/4, less time on ART and lower socioeconomic status.

Conclusions: Long-term cotrimoxazole prophylaxis reduces common skin complaints, highlighting an additional benefit for long-term prophylaxis in sub-Saharan Africa.