

Routine antibiotics in the treatment of uncomplicated severe acute malnutrition in Niger

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Background

Current guidelines for the treatment of uncomplicated severe acute malnutrition (SAM) recommend the provision of routine antibiotics to reduce mortality, however, the benefit of routine antibiotics to children treated as outpatients remains unclear. From 2012-2014, we conducted a randomized trial to assess the effect routine antibiotics on the nutritional recovery of children with uncomplicated SAM in Madarounfa, Niger. There was no benefit of routine amoxicillin treatment on nutritional recovery or mortality, compared to placebo. Amoxicillin reduced risk of transfer to inpatient care in our trial setting (risk ratio = 0.86, 95% CI: 0.76, 0.98).

Methods

To evaluate the effect of routine antibiotic use in the treatment of uncomplicated SAM in an operational context, we enrolled a prospective cohort in three outpatient treatment sites in Madarounfa, Niger from 2016-2017. Two sites were assigned to provide children with amoxicillin when clinically indicated. Children in the third site received routine amoxicillin on admission. Routine program outcomes, including recovery, default, transfer, non-response and death, were compared between sites and with the original trial population receiving routine amoxicillin.

Results

A total of 1,776 children were included in the two non-routine antibiotic sites and 6,185 children at the single routine antibiotic site. There was no difference in risk of recovery, non-response to treatment, or death between groups between sites, but the risk of transfer was lower at the site providing routine amoxicillin. However when controlling for site, there was no difference in the risk of transfer when comparing children receiving routine amoxicillin compared to children not receiving routine amoxicillin

Conclusions

Data from an operational context were used to extend trial results related to the routine use of antibiotics in the treatment of uncomplicated SAM in Niger. The simplification of treatment protocols may allow important advances in the scaling up of treatment but should consider context-specific factors.

We evaluated the non-routine use of antibiotics in the treatment of uncomplicated SAM in an operational context. Simplification of treatment protocols may facilitate the scaling up of programs but should consider context-specific factors.