ABSTRACT

Amoxicillin dispersible tablet (DT) is now recommended by the World Health Organization as a first line product for treatment of pneumonia in children below 5 years. This formulation, however, is not readily available in most of Africa. The main aim of this study was to compare the acceptability, adherence and clinical outcome of amoxicillin dispersible tablets to that of the conventional Amoxicillin oral suspension (OS) in treatment of children aged 2-59 months with pneumonia in Kenya. The study was conducted to inform national roll out of the amoxicillin DT in Kenya. The study employed a two arm cluster randomized controlled trial and utilized quantitative methods in Homa Bay County, Kenya. The community unit (CU) was the unit of implementation and thus the unit of randomization. Children aged 2-59 months with pneumonia were enrolled into the study and depending on which CU they lived, were treated with either amoxicillin DT or OS. Children were then followed up on day 4 and day 6. Acceptability was measured as the proportion of children to whom treatment was considered acceptable defined by perception of taste of the medication given to the child as same or better compared to other medicines and expression of willingness of caregivers to use DT/OS in future, Adherence was measured as the proportion of children who adhered to treatment based on dose given, treatment duration, frequency of daily administration and tablet preparation/suspension reconstitution, and Clinical outcome was measured as complete resolution of symptoms on day 6 without a change of antibiotic treatment. The sample size was 346 children. Differences in acceptability between children put on DT compared to those on OS were assessed using chi-square test. Multivariate logistic regression accounting for clustering was used to assess the differences in treatment adherence and treatment outcomes between children put on DT compared to those on OS (reporting odds ratios and 95% confidence interval bounds). Statistical analysis was performed using SAS and a p-value of less than 0.05 used to define statistical significance. There were high levels of ‘good acceptability’ among both the caregivers administering DT and OS (94% vs. 96%, respectively) (p=0.49). The likelihood of objectively measured adherence on the fourth-day and overall objectively measured adherence, were significantly higher among children put on DT compared to children on OS (OR=13.54, 95% CI=7.74-23.69, p<0.01& OR=10.51, 95% CI=6.28-17.59, p<0.01, respectively). Cure rates were high in both children put on DT and those put on OS (99% vs. 97%, respectively) and the difference was not statistically significant. These results indicate that Amoxicillin dispersible tablets is as acceptable and as effective as the oral suspension in the treatment of pneumonia in children aged 2-59 months, but has better treatment adherence. Given the higher adherence rates and equivalence in effectiveness and acceptability, I recommend that Amoxicillin dispersible tablet be preferentially prescribed over the oral suspension for the treatment of pneumonia in children aged 2-59 months.