ABSTRACT

Objectives: To determine the effects of probiotics in the management of diarrhoea disease and associated symptoms.

Study design/setting: A randomized double blind controlled study involving children aged 6 months to 5 years presenting with diarrhoea to Jos University Teaching Hospital.

Methods: Subjects were randomly allocated to a control group and an intervention group. The subjects in the intervention group were given probiotics (Saccharomyces boulardii) and Oral Rehydration Salts while those in the control group were given a placebo and Oral Rehydration Salts. Data was collected about the patients’ socio demographic characteristics and risk factors associated with diarrhoea. Data was also collected about the characteristics of the diarrhoea stools and associated symptoms like abdominal pain, fever and vomiting. The patients were examined before and after intervention for 5 days. Stool samples were also sent for microbiology, culture and sensitivity. Data collected after intervention included duration of diarrhoea, number of episodes of diarrhoea, weight, number of vomiting episodes and the presence or absence of fever.

Results: There was a significant difference in the mean duration of diarrhea between the probiotics group and the control group after intervention. The mean duration of diarrhoea was 45.86 hours in the probiotic group compared to 101.79 hours in the control group (p=0.00, CI -74.41 to -41.42). There was a significant reduction in the number of episodes of diarrhoea after 24 hours of intervention from a mean of 5.79 episodes to 1.59 episodes in the intervention group as compared to the control group which had a mean episode of 4.62 on day 0 to 3.90 after 24 hours (p=0.000 CI -3.06- -1.55). There was a reduction in the mean number of episodes of vomiting from
0.31 (day 0) to 0.17 (day 5) in the intervention group and from 0.21 (day 0) to 0.17 (day 5) in the control group but this was not statistically significant (p=0.8). There was no significant reduction in the number of subjects who had fever after intervention (p=0.78 at day 0 and 0.16 at 120 hours), abdominal pain (p=0.11 at day 0 and 0.09 at day 5) but there was a significant reduction in the number of individuals who had abdominal pain after 24 hours (p=0.04). Infectious agents were isolated in 30.9% of cases; *Salmonella sp* was isolated in 6.9% of cases, *Shigella* in 17.2% of cases and *E histolytica* and *Giardia lamblia* were each isolated in 3.4% of cases.

**Conclusion:** Probiotics (Sacchromyces boulardii) reduces the duration and number of episodes of diarrhoea. However there were no significant effects on the other symptoms associated with diarrhoea.