CHAPTER V

SUMMARY AND CONCLUSION

Norfloxacin showed good in-vitro activity against bacterial enteropathogens isolated from Thai patients. The pathogens have 100 % (320 in 320 isolated) sensitivity to the drug and have very low minimum inhibitory concentration. The MIC_{50} and MIC_{90} of Vibrionaceae were 0.039-0.093 and 0.085-0.24 mg/L for Aeromonas and Vibrio respectively. All Plesiomonas were inhibited at 0.031 mg/L. The MIC_{50} and MIC_{90} of Enterobacteriaceae were 0.031-0.058 and 0.015-0.115 mg/L for Salmonella and Shigella respectively.

The bacteriological efficacy of NFX group to eliminate the bacterial enteropathogens was more effective than SXT group and placebo group. However, the bacteriological efficacy of SXT group to eliminate the bacterial enteropathogens was also more effective than placebo group. 41 out of 46 (89.1 %), 45 out of 46 (97.8 %) and 46 out of 46 (100 %) of the patients in NFX group were bacteriologically cured after 1, 2 and 3 days of treatment respectively. On the follow up day there was no statistically difference in the bacteriological outcome among the three treatment groups. Morever, the rate of reinfection without symptoms were high in all these groups.

NFX group, SXT group and placebo group showed the similar clinical efficacy. All of these three treatment groups reduced the diarrhoea by giving the normal stools in 47 out of 49 (95.9 %), 46 out of 50 (92.0 %) and 49 out of 55 (89.1 %) of the patients in NFX group, SXT group and placebo group respectively after 3 days of treatment and rendered most patients afebrile within 48 hours after treatments. Other symptoms such as mucus found in stools and reduced skin turgor disappeared within 3 and 2 days of treatments respectively in most patients of all three treatment groups.

There were some statistically differences between the hematological values prior to the initiation of treatment and at 12-24 hours after the completion of trial doses in all three treatment groups. However, the changes among these three groups were similar.

The adverse drug experiences reported from the patients in NFX group [20 out of 49 (40.8 %)] and placebo group [18 out of 55 (32.7 %)] were higher than those in SXT group [6 out of 50 (12.0 %)]. The symptoms reported in this study included gastrointestinal symptoms, e.g. abdominal discomfort,abdominal pain, flatulence etc. and headache. Most of them were of mild and moderate intensity and of a transient nature. These reported symptoms were thought to happen unlikely or possible due to the study drugs. None of these symptoms did require any measures to be taken or lead to a withdrawal of treatment.

In conclusion, norfloxacin showed good antibacterial activity against all bacterial enteropathogens implicated in acute bacterial diarrhoea. Norfloxacin could shorten the duration of faecal shedding of the bacterial enteropathogens and prevented spread of gastrointestinal infection. However, there was no statistically difference in shortening the duration of diarrhoeal symptoms in most of the patients among norfloxacin, co-trimoxazole and placebo.

Norfloxacin should be used in cases of severe acute bacterial diarrhoea in the area where multiple drug resistanct bacterial enteropathogens are common and the likelihood of bacterial transmission is seriously considered.