English Summary

SUMMARY AND CONCLUSION

Schistosomiasis is a widespread disease. It affects more than 200 million people. Numerous approaches have been attempted to reduce the transmission of infection and the morbidity of the disease.

In control of schistosomiasis, the use of drugs that are safe and effective will remain the main tool until a successful vaccine is produced. Referring to the possibility of appearance of drug resistant parasites, specially with retreatment regimens in endemic areas, search for new schistosomicidals is essential.

In the present study, 80 male Swiss albino mice, weighting 20 – 25 grams each, mice were infected by subcutaneous injection of mice with 80 ± 10 *S. mansoni* cercariae then mefloquine was given at 21 and 49 days post infection then mice were grouped to:

1-**GroupI**

Treated with single oral dose of mefloquine (400mg/kg) at 21 days post infection to study the effect of mefloquine on juvenile stage of *S. mansoni.*

2- **GroupII**

Treated with single oral dose of mefloquine (400mg/kg) at 49 days post infection to study the effect of mefloquine on adult stage of *S.mansoni.*

3-**Group III**

Control group of infected untreated mice at 21days.

4-**Group IV**

Control group of infected untreated mice at 49 days.

Each group contains 20 mice which are sacrificed at different intervals two days,three days and one week post treatment to detect the tegumental changes at these intervals.

5-**Group V**

uninfected and untreated.(healthy control group).

Perfusion was done two,three and seven days after administration of single oral dose of 400mg\kg mefloquine.

Results revealed that :the percentage of total worm burden reduction in juvenile after two days was 75.9% ,three days it was 81.6% and one week it was 95.8% . In mature infection the percentage of total worm burden reduction was 44.9% two days post treatment, while three days post treatment it was 58.2% and 7 days post treatment it was 72.8% .

Tegumental change of juvenile worms recovered from mefloquine treated mice:

Juvenile worms recovered showed variable degree of tegumental changes especially after one week of treatment, with retracted oral sucker and slightly retracted ventral sucker. These tegumental changes was in the form of fusion and swelling of the tegumental ridges with retracted oral sucker two days post treatment .

Three days post treatment showed pitting of the tegument and corrugations with retracted oral sucker , while seven days post treatment showed swelling of the tegument in parts and shrinkage in the other parts with formation of vesicles and deep furrows with retacted oral sucker .

Tegumental change of adult worms recovered from mefloquine treated mice:

Tegumental change of adult *S. mansoni* recovered from mefloquine treated mice have been observed in both male and female which were prominent in female worms .

Adult worms recovered showing variable degree of tegumental changes two days after administration of mefloquine to *S.mansoni* infected mice at 49 days post infection, all *S. mansoni* worms examined showed evident of changes consisting of blebbing, loss of spines , flat ventral sucker and deformity of oral sucker in male . Shedding of the tegument from the basement membrane and formation with deep furrows on the tegument of female.

Three days after administration of mefloquine to *S.mansoni* infected mice at 49 days post infection, all *S. mansoni* worms examined showed evident of changes consisting of blebbing, loss of spines and shrunken oral sucker with formation of deep furrows in male , deep furrows and its wrinkling in female.

One week after administration of mefloquine to *S.mansoni* infected mice at 49 days post infection, all *S. mansoni* worms examined showed evident of changes consisting of flat tegument with loss of all tubercles and flat ventral sucker with loss of tyre like appearance .

conclusion

Mefloquine induced tegumental changes more in females,so it may be effective as anti schistosomal drug.