EFFECT OF TRIPHALA ON SERUM TOTAL CHOLESTEROL LEVEL IN HUMAN HEALTHY VOLUNTEERS

Sam Sam Htu

ABSTRACT

This study was aimed to investigate the cholesterol lowering effect of Triphala as capsule dosage form in human healthy volunteers. The design of this study was community based interventional study. The study period was started from May 2012 to October 2013. 40 subjects from State Pariyatti Sāsana University, Yadanarpon San Nunnery and University of Traditional Medicine who fulfill the inclusion and exclusion criteria were studied in this study. The aqueous extract of Triphala was done by solid-liquid extraction method. The concentrated Triphala extract was produced as powder by using freeze-dryer. The capsule dosage form of Triphala freeze-dried powder was done by manual filling machine and the evaluations of capsules were performed. The serum total cholesterol level after 4 - 6 hours from the last meal were measured by the ABX Pentra 400 Fully Automated Analyser on 0 week (before consumption of Triphala capsules) and at the end of 4 weeks, 6 weeks and 8 weeks after daily consumption of 600 mg of Triphala capsules. In phytochemical analysis, flavonoids, carbohydrates, glycosides, reducing sugars, tannins, amino acids, steroids, phenolic compounds and saponins were present. In all subjects, the serum total cholesterol level (Mean ± SD) was 5.62 ± 0.32 mmol/L before consumption of the Triphala capsules and mean serum total cholesterol levels after intervention on 4 weeks, 6 weeks and 8 weeks were 5.25 ± 0.5 mmol/L, 5.04 ± 0.5 mmol/L and 4.83 ± 0.46 mmol/L respectively. The serum total cholesterol level was reduced by 0.365 (mean difference) at the end of 4 weeks ($p<0.001$), 0.575 (mean difference) at the end of 6 weeks ($p<0.001$) and 0.792 (mean difference) at the end of 8 weeks ($p<0.001$). Serum total cholesterol levels were significantly reduced at 4 weeks, 6 weeks and 8 weeks compared to 0 week. Regarding the traditional concepts, Triphala possessed the *ushna virya* (warm energy) and *laghu* (light) and *ruksha* (dry) properties which could lowered and balanced the serum total cholesterol level. The result from current study justified Triphala can be used as the cholesterol lowering agent in Myanmar Traditional Medicine.

ANTIHYPERGLYCEMIC EFFECT OF BARK OF *ALSTONIA SCHOLARIS* LINN. (TAUNG-MA-YOE) IN ADRENALINE INDUCED ALBINO RATS

Zin Mar Lwin(2014)

ABSTRACT

These investigations were carried out to determine whether the extract of bark of *Alstoniascholaris* Linn. (Taung-ma-yoe) possess antihyperglycemic activity or not. The dried barks of *Alstoniascholaris* Linn. (Taung-ma-yoe) were extracted with distilled water. The aqueous extract was studied in adrenaline induced hyperglycemic albino rats. The control, standard and test groups (four doses of extract) of experimental animals were orally administered with distilled water (10 ml/kg), glibenclamide (0.5 mg/kg) and four doses of the extract (500 mg/kg, 750 mg/kg and 1000 mg/kg and 3000 mg/kg) respectively. Adrenaline (0.2 ml/kg) was injected subcutaneously to all rats at the onset after the administration ofthe drugs and vehicle administration. Then, blood glucose levels were taken by glucometer at 1 hr, 2 hr, 3 hr, 4hr after adrenaline injection. In observation of aqueous extract of bark of *Alstoniascholaris*Linn. (Taung-ma-yoe) at the four different doses, aqueous extract 500 mg/kg showed significant antihyperglycemic effect at 1hr ($p < 0.05$), 750mg/kg showed significant antihyperglycemic effect at 1 hr ($p < 0.01$) and 3 hr ($p < 0.05$) and 1000 mg/kg show significant antihyperglycemic effect at 1hr ($p < 0.05$), 2 hr ($p < 0.05$) and 3 hr ($p < 0.05$) whereas 3000 mg/kg showed significant antihyperglycemic effect at 1 hr($p < 0.01$), 2 hr ($p < 0.05$) and 3 hr ($p < 0.01$) after oral administration when compared with the control group. According to preliminary phytochemical analysis of aqueous extract of bark of *Alstoniascholaris* Linn. (Taung-ma-yoe) showed the presence of alkaloids, glycosides, phenols, saponins, steroids and tannins. These findings suggested that aqueous extract of *Alstoniascholaris*Linn. (Taung-ma-yoe) possessed significant antihyperglycemic effect in adrenaline induced hyperglycemic albino rats model. Thus blood glucose lowering effect of bark of *Alstoniascholaris*Linn. (Taung-ma-yoe) was not too long but it was orally effective in albino rats.

Antidiarrhoeal Activity of the Ethanolic Extract of Unripe Fruit of *Limoniaacidissima* L.(Thee-Thee)

Aye HninThwe*, EiEiHtwe**,SweSwe**,Sandar Linn**,Myitzu Tin Oung**, ZarniHtoonLwin***,WinKo****,WahWahOo*****,MaungMaungThet*
University of Traditional Medicine*, Department of Medical Research (PyinOoLwin Branch)**, University of Medical Technology (Mandalay)***, Member of Myanmar Traditional Medical Council ****, University of Medicine (Mandalay)*****

ABSTRACT

The purpose of the present study was to evaluate scientifically the antidiarrhoeal effect of unripe fruit of *Limonia acidissima* L. by using castor oil induced diarrhoeal model in mice. The unripe fruit of *Limonia acidissima* L. was extracted with 95% ethanol to obtain the ethanolic extract. The antidiarrhoeal activity of the ethanolic extract was investigated by using castor oil induced diarrhoea model in albino mice and determined by two in vivo studies, measuring frequency of diarrhoea and percent of small intestinal transit. In this study, compared with control, the ethanolic the extract 480 mg/kg has significantly reduced in frequencies of diarrhoea at 3 hour after castor oil administration, $p < 0.05$ and also reduced in mean frequencies of diarrhoea within 4 hours, $p < 0.01$. It had also reduced in percent intestinal transit (ie, antimotility action) when compared with control, $p < 0.05$. It was observed that the ethanolic extract 480 mg/kg was as nearly effective as loperamide, in reduced in frequencies of diarrhoea at 3 hour after castor oil and mean frequencies of diarrhoea within 4 hours after castor oil and there was statistically no significantly difference ($p = 1.000$ and 0.968 respectively). Similarly, it was also as nearly effective as loperamide in antimotility action ($p = 0.931$). The phytochemical analysis of the ethanolic extract of unripe fruit of *Limonia acidissima* L. showed it have contains tannins, alkaloids, carbohydrates, glycosides, phenols, starch, steroids and cardiac glycosides. These constituents may mediate the antidiarrhoeal property of the ethanolic extract of unripe fruit of *Limonia acidissima* L. The results of this study supported that the ethanolic extract of unripe fruit of *Limonia acidissima*L. (Thee-Thee) has potential antidiarrhoeal effect and therefore it is possible to be used as home remedy for symptomatic relief of diarrhoea especially in rural areas where currently used antidiarrhoeal drugs such as loperamide and diphenoxylate are not easily available.

Antibacterial Activities of the Extracts of Aerial Parts of *Aristolochia Indica* Linn.(Eiktharamuli)

Khin Htet Zin[1], Ni Ni Zaw[1], Saw Myat Thwe[2], Than Htun[1], Zarni Htoon Lwin[3],Thein Zaw Linn[1], Myitzu Tin Oung[2], Ei Ei Htway[2]

1. University of Traditional Medicine, Mandalay

2. Department of Medical Research (Pyin Oo Lwin Branch)

3.University of Medical Technology, Mandalay

ABSTRACT

Wounds caused by microbial infection are the most common public health problems. The increase in antibiotic resistance and the lack of or high cost of potent antibiotics exaggerates wound-related morbidity and mortality. Traditional medicine based on plant materials are possible sources for new potent antibiotics for therapeutic use. For evidencebased traditional medicine, antimicrobial activities of chloroform, ethanolic and aqueous extracts of aerial parts of *Aristolochia indica* Linn. was studied *in vitro* by using agar dilution and disc diffusion methods. The test bacteria were control strains of *Staphylococcus aureus,Pseudomonus aeruginosa* and *Escherichia coli* which are the most common wound causing bacteria in this country. The standard antibiotic used was cefotaxime. Agar dilution method demonstrated that the chloroform and aqueous extracts had no antibacterial activity against *Staphylococcus aureus, Pseudomonus aeruginosa* and *Escherichia coli*. The ethanolic extract had no antibacterial activity against *Escherichia coli*. However, ethanolic extract inhibited the growth of *Staphylococcus aureus* and *Pseudomonus aeruginosa* with MIC 1250 µg/ml and less than 3.125 µg/ml respectively. The findings from disc diffusion method indicated that the chloroform extract showed intermediate antibacterial activity against only on *Staphylococcusaureus*. The zones of inhibition were found to be increased with increasing the dose ($r = 0.959$, $p<0.01$). The ethanolic extract had intermediate antimicrobial activity against *Staphylococcus aureus* and significant antimicrobial activity on *Pseudomonus aeruginosa* with significant dose related antibacterial activity ($r = 0.962$, $p<0.01$) and ($r = 0.964$, $p<0.01$) respectively. The aqueous extract had no antibacterial activity on all three bacterial strains. In comparing cefotaxime (30 µg/ml) and extracts of *Aristolochia indiica* Linn. (5 mg/disc), the chloroform and ethanol extracts showed antimicrobial potential against *S. aureus* (AI = 0.43 & AI = 0.46 respectively). Higher activity against *P. aeruginosa* was observed by the ethanolic medicinally valuable plant as antibacterial agent should be formulated in the treatment of wound infection.

Keywords: Antibacterial Activity, *Aristolochia indica* Linn., Eiktharamuli