A meta analysis on artemether in the prevention of Schistosomiasis

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Background: Schistosomiasis ranks second to malaria in terms of socioeconomic & public health importance, with 200 million people infected in 75 countries. Praziquantel is the current drug of choice and is highly effective against the adult stages of all human schistosome species. Development of resistance to Praziquantel was noted. Artemether has been developed as a prophylactic agent for the prevention of schistosome infections. In this light, we aimed to evaluate the efficacy of artemether in the prevention of schistosomiasis.

Methods: We searched Pubmed, Google Scholar for randomized controlled trials. 6 studies fulfilled the inclusion criteria for analysis. However, we were only able to retrieve the full text of 2 articles examined through meta analysis. Searched trials published from 1995 to 2011.

Eligible studies were randomized and blinded, placebo controlled trials of oral artemether at a dose of 6 mg/kg once every 2-4 weeks with participants’ ages ranged from 5-60 years old, regardless of sex. Trials that compared artemether with another drug (praziquantel) and trials that combined artemether with praziquantel were excluded.

Cochrane Collaboration’s tool for assessing risk of bias was employed to ensure the validity of the selected studies. Results were extracted independently by two authors using a paper data collection form and any disagreements were resolved by consensus of the three authors.

Three investigators carried out the initial search and two investigators independently reviewed studies. Our indices for heterogeneity were the p value (<0.00001) and I2 (97%). Analysis done using the Review Manager v5.1.

Results: Two eligible studies were analyzed. Among the 529 participants who were treated with artemether, there were 79 incurred schistosomiasis infection. In the placebo group, 153 out of 511 were found to be infected with schistosomiasis (Risk ratio = 0.50 [at 95% CI =0.40, 0.61]).

Conclusion: This study shows that repeated oral artemether significantly reduces incidence and intensity of patent schistosomiasis infection and results in high compliance. Hence it can be used as a preventive tool for the control of this parasitic disease and may be included in the integrated schistosomiasis control efforts. More methodologically sound studies investigating the efficacy and safety of Artemether is warranted.

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Surrey on some epidemiological factors of cutaneous leishmaniasis in Fars Province of Iran

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Background: Cutaneous leishmaniasis a common health problem in tropical and subtropical areas and about 10-50 million people are involved in the world. WHO has estimated that about 1.5 million new cases of Cutaneous and Visceral leishmaniasis are appearing in the world annually. This disease is endemic in about 80 countries and its prevalence is more obvious in Iran and Saudi Arabia.

Methods: Information was collected from center of disease control (CDC) of the endemic area for getting information about some epidemiological factors such as sex, age, season, site of body
involvement, interval between appearance of lesions and diagnosis and number of cutaneous lesions in each affected person.

**Results:** Results showed that cutaneous leishmaniasis was observed more in children younger than 15 years-old.

Although, 44.9% of all patients were females and 51.1% were males but sex factor of the patients was not statistically significant. This investigation demonstrated that 44.4% had only one lesion. More than one skin lesion reported in 55.6% of the patients that is indicated that sand-fly, for complete feeding, bites it’s host more than one time or more than one sand-fly bite patients.

**Conclusion:** In order to prevention of leishmaniasis, health education about this disease and also providing protection facilities are recommended in endemic areas.

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**Modeling and simulation to evaluate pyronaridine exposure in pediatric malaria patients**

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**Background:** Malaria causes substantial illness and death in the world’s population, especially in children less than 5 years old. Pyronaridine/Artesunate (PA) 3:1 fixed dose combination is a novel artemisinin combination therapy (ACT) in development for the treatment of acute uncomplicated *Plasmodium falciparum* and blood stage of *P. vivax* malaria. Tablet (180:60 mg PA) and pediatric granule (60:20 mg PA) formulations are under parallel development for clinical use. The purpose of this study is to use pharmacokinetic modeling and simulation to explore exposure among pediatric dosing groups for 3 PA weight-based dosing regimens.

**Methods:** Population pharmacokinetics of pyronaridine was conducted using non-linear mixed effect modeling. The pharmacokinetic model incorporated data from healthy (166) and malaria infected (642) subjects participating in nine Phase I-III clinical trials. Age ranged from 0.6 to 60 years and weight from 9 to 90.1 kg. Influences of age, weight, body mass index, malaria infection, creatinine clearance, alanine aminotransferase, aspartate aminotransferase, gender, and ritonavir administration on pyronaridine pharmacokinetics were evaluated. Monte Carlo simulations were performed to reflect pyronaridine exposure in pediatric malaria patients based on current dosing recommendations. Typical pyronaridine AUC values expected for pediatric malaria patients of weights between 5-20 kg were obtained using covariate parameter relationship of values expected for pediatric malaria patients of weights between 5 and 20 kg and drug exposures that are similar to those achieved in adults.

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**Clinical presentations of ALA (amoebic liver abscess) among tuak consumers in Medan**

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**Background:** Amoebiasis is endemic in many tropical countries including Indoensia. Amoebic liver abscess (ALA) is one of the most important extraintestinal amoebiasis, which alcoholism is one of the risk factors. Tuak is a traditional beverage contains 15 – 25% alcohol in Medan. The presentation of amoebic liver abscess among tuak consumers in Medan has not been studied.

**Objective:** To describe the presentation of ALA among tuak consumers in Medan.

**Methods:** This is an observational study conducted from May 2007 to March 2012 and included all of the patients with amoebic liver abscess. The diagnosis of liver abscess was based on the clinical appearances and USG. The presentations of ALA which were recorded include fever, leucocytosis, and hepatomegaly. The abscess puncture was performed for etiology confirmation. All of the patients received metronidazole and paramomycin. We per-