PP-196 Evaluation of propolis as adjuvant to SWAP in murine *Schistosoma mansoni* with determination of changes in cytokine level

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Electron-microscopic (EM) study of bone marrow and liver of the different animal groups was also undertaken. Administration of Praziquantel (PZQ) in the immunized group given propolis then infected and treated with PZQ (group 5) yielded better outcome by almost eradication of adult worms (98.6 percentage reduction) with disappearance of eggs in tissues (98.16 percentage reduction). The animal group immunized & given propolis (group 3) also revealed significant decrease in parasitological parameters, where percentage worm reduction was 68% and that of hepatic and intestinal ova reduction being 68.0% and 70.60% respectively. The increased production of INFγ recorded in infected control group 1 (1110±5.02 pg/ml), decreased significantly in group 3 (332±4.03 pg/ml) even more than the level recorded in PZQ treated group 4 not receiving propolis (450±34.03 pg/ml). TNFα showed mild increase in all immunized groups, but both inflammatory mediators (INFγ and TNFα) revealed normal levels in group 5. The levels of Alanine aminotransferase (ALT) and Aspartate aminotransferase (AST) decreased to normal values in group 5. Electron microscopy (EM) examination showed that propolis had simulative and regenerative properties on bone marrow cells as manifested by marked cellularity represented by all bone marrow elements especially the very premature stages. The EM study of liver section in group 5 also showed regenerative changes. These changes accompanied by propolis administration were not detected in their corresponding controls. The results suggested that early propolis administration may result in immunomodulatory actions which in turn enhanced the efficacy of SWAP.
Further investigations of the possible use of propolis in addition to PZQ or its application in a vaccination program that could be promising in down regulating morbidity would be needed in schistosomiasis control.

PP-197 Diagnosis of active human filariasis before and after treatment with diethylcarbamazine using a pair of monoclonal antibodies

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Background: Filariae are nematodes that live in various human tissues. They produce enormous microfilariae (larvae) inside humans.
Methods: This study was designed to prepare monoclonal antibodies (MAbs) against filarial worm antigen (FWA) with immunodiagnostic potential for human filariasis, and aimed to evaluate the chemotherapeutic effect of doxycycline on patients infected with *Wuchereria bancrofti*.
Results: From a panel of anti-filarial antigen MAbs; a pair of MAbs (9F/10B & 5F/6H), highly reactive with filarial antigen and showing no cross reactivity against other parasites antigens were selected and characterized. The pair was found to be of IgG1 subclass. Both MAbs recognized one band with 88 kDa molecular weight by western blots. The pair of MAbs was employed in sandwich ELISA for the detection of circulating filarial antigen (CFA); one MAb (9F/10B) was used as antigen capturing antibody and the other (5F/6H) as peroxidase-conjugated antigen detecting antibody. The assay reached a lower detection limit of 10 ng/ml of filarial antigen. CFA levels were measured before and after treatment with DOC in serum samples from 100 filariasis patients (67 with microfilaraemia and 33 with elephantiasis), 60 patients with other parasites including schistosomiasis, fascioliasis and echinococcosis and 50 healthy individuals as negative control. CFA levels were detected in sera of 96 out of 100 filariasis patients showing an overall sensitivity of 96% (94.1% sensitivity for microfilaraemia group and 100% sensitivity for elephantiasis group). All negative control sera were negative for CFA, while 4 patients out of the other parasite group were negative for CFA giving an overall specificity of 96.4%.
Conclusions: These findings suggest that (9F/10B) MAb and (5F/6H) MAb could be used as a reliable diagnostic indicator for the activity of human filariasis and as a cure monitor particularly in control programs for endemic areas.

PP-198 Comparison between different immunological techniques for detection of circulating *Fasciola* antigen in sheep

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Background: The detection of *Fasciola* antigen in serum or stool could be more valuable in diagnosis, hence early treatment before irreparable damage.
Methods: In this study, fresh adult *Fasciola gigantica* worms were collected, then incubation in culture medium and collected medium was used to extract crude excretory–secretory (E/S) antigen. E/S was used to immunize rabbits to raise specific antibodies against *Fasciola* spp. Purified antibodies are further used as primary capture to coat ELISA plates. The secondary capture of antibodies was by conjugation with horse radish peroxidase. Sandwich ELISA and DOT-ELISA were performed to detect *Fasciola* antigens in both serum and stool samples collected from a total of 152 sheep. After slaughtering, gross inspection of liver and parasitological stool examination, sheep were divided into *Fasciola* positive group (97 sheep), other helminthic infection group (30 sheep) and healthy control group (30 sheep).
Results: *Fasciola* antigen detected in serum of sheep by ELISA showed 94.8% sensitivity and 95% specificity. Copro-antigen detected by ELISA showed 96.9% sensitivity and 96.7% specificity. The sensitivity and specificity of copro-antigen by ELISA in stool sample were higher than that recorded by Sandwich ELISA for serum. Dot ELISA sensitivity was found to be 98.9% and specificity 98.3%.
Conclusion: The Dot ELISA gives better sensitivity and specificity than sandwich ELISA for serum and coproantigen in stool by ELISA.

PP-199 Detection process of *Leishmania* parasite in reservoir hosts of Leishmaniasis in Fars province using three routine laboratory methods and by Nested PCR of ITS-rDNA gene

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Background: Leishmaniasis is one of the six important tropical diseases that World Health Organization have been recommended and supported to study and research in different its aspect. Leishmaniasis is one of endemic parasitic disease in Iran. Developing of building and changing ecological aspect of countryside and villages recently, Fars province were considered as one of the focus of Leishmaniasis in Iran.