65.023
Biochemical Changes in the Fertile and Sterile of Hydatid Cyst Fluid in Sheep
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Keywords: Hydatid fluid; Fertile cyst; Sterile cyst; Biochemical compound

Introduction: Hydatid cyst involves vital organs such as, liver, lungs, spleen, kidneys and so on. Hydatidosis could be seen in many ruminants and accidentally in human. Hydatidosis causes impairment physiological functions. This disease disturbs the balance of biochemical compounds.

Material and methods: Eighty five livers and lungs from sheep having Hydatid cysts were taken from Ghaem Abattoir. Five milliliters of Hydatid fluid was taken from each from fertile and sterile cyst. Protein, cholesterol, glucose, phosphate, calcium and enzymes like alkaline phosphatase (ALP), lactate dehydrogenase (LDH), alanine aminotransferase (ALT) and aspartate aminotransferase (AST) have been measured by Autoanalyzer apparatus. Flamphotometry has been used for Na and K measurement.

Results: The mean of biochemical compound such as, protein, cholesterol, glucose and enzymes like ALP, LDH, ALT and AST was different in the fertile and sterile cysts of lung and liver in sheep. The total protein, cholesterol, glucose and LDH, ALP, AST enzymes differed significantly between fertile and sterile in liver. The above mentioned compounds of lung except cholesterol and alanine aminotransferase also differed significantly between sterile and fertile cysts. Mineral elements such as, Na⁺, K⁺, Ca²⁺ were different in fertile and sterile cysts in accordance to their location. Na, K and Ca in fertile cyst of liver were higher than fertile cyst.

Conclusion: These results lead us to this idea that ability of the wall of sterile and fertile is different and this could be used as a hypothesis for biochemical control of Hydatidosis.

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65.024
Relapse After Treatment with First Stage Drug in Human African Trypanosomiasis: Contribution of Molecular Biology
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Chemotherapy of Trypanosoma brucei gambiense human African trypanosomiasis (HAT) relies on only a few drugs: suramin or pentamidine for the first stage of the disease, melarsoprol and eflornithine for the second stage. Drug treatment failures are mainly reported for melarsoprol and have alarmingly increased in many epidemic foci, such as Uganda (30%), Sudan (16–21%), and Angola (25%). Relapse after pentamidine treatment has not yet been described. In March 2006, a parasitological survey was carried out in Mandoul focus (Chad). 76 HAT cases were diagnosed, of which 54 were in the first stage. Six months later, white blood cells (WBC) in the cerebrospinal fluid were found to be increased in 24% of first-stage patients. After excluding factors of treatment failure such as low/wrong dose or poor quality drugs, we concluded that these patients were in relapse. Pentamidine treatment failure rarely occur in the field. Reasons for relapse could be parasite-related factors such as drug resistant-trypanosomes. It has been shown that trypanosome resistance is a result of reduced net drug uptake. Generally, it is believed that pentamidine enters the trypanosome via the P2 purine transporter, but also via at least two other transporters, HAPT1 and LAP1. Based on this hypothesis, it has been proposed that resistance to pentamidine is quite difficult to develop since the function of several transporters must be inhibited. We think that it would be very interesting to analyze isolates from patients with treatment failure. By using the techniques of molecular biology, the presence or absence of these transporters can be determined in “resistant parasites”. Pentamidine treatment failure is emerging in HAT foci. It is urgent to take control measures and prevent its spread to other foci.

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65.025
The Distribution of Intestinal Parasites Prevalence at Five Years of Sex and Species of the Osmangazi University Medical Faculty
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Background: In this study, patients (outpatients and inpatients) with various gastrointestinal system complaints presenting at various clinics of the Eski ehir Osmangazi University medical Faculty, from February 2003-December 2007 were investigated for intestinal parasites. Prevalence of intestinal parasites was evaluated according to species, gender and the years in which cases were seen.

Material and method: 34.733 stool samples prepared by formal-ethyl acetate concentration and after saline and iodine preparations for microscopic examination under 10× and 40× magnification. Also trichrome stained preparations in ambiguous amoebas cases and modified Erlich Ziehl Nielsen stained preparations for Cryptosporidium spp. were examined by oil-immersion objectives (100×).

Results: One or more parasites were found in 1252 of the 34.733 stool samples (included nonpathogenic parasites). The overall prevalence of intestinal parasitic infection rate was 3.6%, of these 52.5% were female and 47.5% male. Predominant parasites was Entamoeba histolytica/dispar group amoebas with which 31% (397/1252), followd by Giardia lamblia 19% (236/1252) and Blastocystis hominis 17% (108/1252), Cryptosporidium parvum 4.5% (56/1252). Selophan band method is used in a few cases, therefore distinct ratios from other studies are detected in helmint cases. The ratios of Entamoeba vermicularis 2.3% (29/1252), were as Taenia saginata 0.8% (10/1252) and Strongyloides stercoralis 0.4% (5/1252) respectively. In a previous 10 years retrospecive study which was performed in our hospital, we detected...
important decrease in prevalence of parasites. But intestinal parasites are still important problems.

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65.026

Seroepidemiology of Toxoplasma gondii in Workers of Slaughterhouse in Zapopan, Jalisco

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Background: Toxoplasma gondii was discovered by Nicolle and Manceaux in 1908, and it is the causal agent of human and animal toxoplasmosis. Slaughterhouse workers can acquire the infection inadvertently through wounds when they handle raw meat contaminated with Toxoplasma gondii. In Mexico there is no previous study of slaughterhouse workers; The aim of this study was to find the prevalence of anti-Toxoplasma antibodies in these workers and to evaluate risk factors.

Methods: IgG antibodies were identified through the ELISA immun assay (Bliokit) in 145 workers of the Municipal Slaughterhouse in Zapopan, Jalisco, Mexico.

Results: The prevalence of anti-Toxoplasma IgG antibodies was found in 104 (72%). The antibody levels were positively related to the time spent working in the slaughterhouse. The data analysis showed no statistically significant difference in the prevalence of anti-Toxoplasma antibodies when we compare other risk factors such as the habit of eating raw meat, consuming unwashed vegetables, or having cats, for which we consider the principal risk factor is working in the slaughterhouse and being in contact with raw meat contaminated by T. gondii.

Conclusion: The prevalence of anti-Toxoplasma IgG antibodies was greater than that found in other study populations in Mexico, suggesting a considerable occupational risk in slaughterhouse workers.

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65.027

Analysis of PGF2α Synthase in Old and New World Species of Leishmania

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Background: Leishmaniasis is characterized by an increase in prostaglandin (PG) levels in the host, which accounts for some of the symptoms of the disease. The molecular mechanisms for the up-regulation of PGs during infection are poorly understood. Identification of the enzymes which catalyze the production of PGs provides a basis for better understanding of PGs’ role in Leishmaniasis.

Methods: To investigate the distribution of Prostaglandin F2α (PGF2α) synthase in Leishmania, isolates of L. major, L. donovani, and L. tropica (Old World species) and L. amazonensis, L. braziliensis, L. mexicana, and L. chagasi (New World species) were cultured in vitro. Promastigotes were harvested by centrifugation, washed with Phosphate buffered saline and genomic DNA (gDNA) extracted. The PGF2α synthase gene was amplified using LmPGFS gene specific primers. 25 μg of total protein was extracted from each species, analyzed on 13% SDS-PAGE gels, and transferred onto an Immoblot PVDF membrane.

Results: We detected the PGF2α synthase gene in the Old World species (855 bp) but failed to detect it in any of the New World species except for a 2 Kb fragment corresponding to L. braziliensis. The Western Blot analysis detected the PGF2α synthase enzyme exclusively in the Old World strains.

Conclusion: The PGF2α synthase gene was only detected in one of the New World species, and none expressed the synthase enzyme even though most species of New World Leishmania retain the ability to synthesize PGF2α. Evidently, different genes and enzyme systems have evolved to synthesize PGF2α in the Old and New World species. This divergent evolution of the synthase genes in disparate geographical locations may suggest an important role for PGF2α in differing Leishmania vector compatibility between the Old and New Worlds.

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65.028

Diarrhoeagenic Protozoan Parasites in Rural Persons and Links to HIV Infection and Drinking Water Sources

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Diarrhoea accounts for most of the global morbidity and mortality. It is mostly waterborne and causes an estimated 2.2 million deaths yearly. Ninety percent (90%) of HIV/AIDS patients in developing countries suffer from episodic diarrhoea.

This study enrolled 113 subjects who volunteered in a rural community in Zimbabwe. Thirty-four (30%) were males, 79 (70%) were females whose ages ranged from 2—89 years. HIV counseling and testing was done. Stool samples were collected from 104 subjects as well as 1 litre water samples from their drinking water sources. Examinations for parasitic infections were done on all samples using the standard parasitology operating procedures for processing samples.

Methods used were wet preparations, formal ether concentration method, gomori/trichrome staining and the cold Ziehl Neelson staining. The same methods as described above were also done for water samples, except the formal ether method was replaced by the zinc sulphate technique.

Twenty-nine (25.7%) of the study subjects were HIV positive and 84 (74.3%) were negative by 2 rapid serology tests.