Microbiology - Infectious diseases

W202

The prevalence of intestinal parasitosis in the laboratory of parasitology of Mohammed VI University Hospital

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Background-aim

Intestinal parasitosis is caused by parasites belonging to the groups: protozoa and helminths, which may be responsible for intestinal and/or hepatic disorders, and are closely linked to the level of hygiene.

The main objective of this study is to determine the prevalence and parasitic indices in the laboratory of parasitology of Mohammed VI University Hospital.

Methods

This is a retrospective study conducted in the Mycology Parasitology Department, spanning a period of 24 months, from 1 January 2017 to 31 December 2018, involving 781 stool parasitological examinations.

The results of the examinations were recorded from the laboratory's activity register.

Each sample of freshly collected stool was examined macroscopically and microscopically, between slide and coverslip, after dilution with saline serum and Lugol stain, completed with a concentration technique (Ritchie).

Results

From a total of 781 samples received, the epidemiological data analyzed showed an average age of 38.48 years, with a sex ratio F /M of 1.35. 62.3% of the samples received from external consultant patients. The prevalence of positive samples was 21.2%, the positivity of the parasitological examination was higher in adults (> 15 years): 80% compared to children: 20%.

The majority of isolated parasites were protozoa (98.75%); Blastocystis hominis is the predominant parasite with a prevalence of 51.78%, followed by intestinal flagellates: 17.5%, *Entamoeba coli*: 14.37%, *Endolimax nana*: 12.5% and Entamaeba histolytica: 8.75%, helminths were rarely isolated 1.25%.

Polyparasitism was reported in 8.75% of positive samples.

Conclusions

The prevalence of intestinal parasites stay high. It is dominated by Blastocystis hominis, amoebae, and intestinal flagellates, which are considered low hygienic indicators.

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Evaluation of the application of the diagnostic protocol in a single step of Hepatitis C

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Background-aim

Hepatitis C is a health problem which requires that some basic criteria should be established in order to achieve the objectives proposed by the World Health Organization (WHO), such as its eradication in 2030. The proposed objectives include to diagnose the 90% of patients and to treat the 80% of them.

In January 2018, our laboratory established a new diagnostic protocol in a single step of Hepatitis C Virus (HCV). This protocol consisted of determining the viral load after the positive result for HCV antibodies in the same sample. And thereafter communicate it to the Service of Digestive to prevent the loss of patients.

Objectives

Assessment of the established protocol and confirmation of the patients' visit to the Service of Digestive.

The relation between the patient's personal circumstances and the attendance to the medical consultation.

Methods

All patients diagnosed with Hepatitis C in our hospital are studied from January to July 2018 and afterwards they are referred to the Service of Digestive to be assessed and treated.

In this period there were 111 patients with positive HCV antibodies (Dxl 800 Access Immunoassay System, Beckman

Coulter®) who were found to have viraemia (GeneXpert System, Werfen®). Subsequently, they were followed to confirm their attendance to the specialist consultation.

Results

A total of 111 viral loads were carried out, and 40 of them were positive: a 36.4%.

Among these 40 positive viral loads, 36 attended to the Digestive consultation (90%), 3 did not attend to the Digestive (7.5%) and one patient died over the course of the study (2,5%).

Among the 3 patients that did not attend to the consultation, two were man, one had problems with alcohol and the other one was drug user, and the third patient was a woman of foreign nationality the personal circumstances of which were unknown.

Conclusions

The 90% of patients diagnosed with Hepatitis C in our hospital have attended to Digestive consultation and only the 7.5% did not attend. This confirms that the defined strategy has been effective, obtaining results closest to the objectives proposed by the WHO.

The 7.5% that did not attend to the medical consultation are patients that belong to a group at risk of social exclusion, making it difficult the application of the protocol.

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Comparative seroepidemiological surveillance of visceral leishmaniasis and its association with diabetes co-morbidity in Osun State, Nigeria

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Background-aim

Visceral leishmaniasis is the most severe form of leishmaniasis and the second largest parasitic killer in the world after malaria. This sero-epidemiology surveillance was carried out to ascertain visceral leishmaniasis incidence in Osun State, Southwestern Nigeria.

Methods

A total of 272 volunteers from different towns of the State were enrolled for participation in this study. They were grouped viz.: Control, Diabetic, Diabetic Foot Ulcer in order to investigate the incidence of VL and the association of the disease co-morbidity with diabetes viz-a-viz implication on biochemical parameters of kidney (Urea and Creatinine) and liver (ALT and AST) functions. Using standard protocols of ELISA, Buffy coat and thin film techniques, VL was diagnosed for each volunteer.

Results

Following screening, the Buffy coat (least recommended) technique did not detect the Leishmania parasite (0%), whereas the thin film examination (sensitivity: 2.3%, specificity: 99.6%, negative predictive value: 84.1%, positive predictive value: 50%) detected 2 (2.1%) while ELISA (the gold standard) detected 44 (16.2%) leishmaniasis cases among the participants. The results revealed statistically significant ($p < .05$) decreased urea, increased creatinine, elevated ALT and AST levels in participants found to be infected with Leishmania species compared to those not infected. It is interesting to note that urea, creatinine, ALT and AST levels of participants having a co-morbidity of VL-diabetes and VL-diabetic foot ulcer did not change significantly compared to the Leishmania-infected participants without diabetes or the foot ulcer.

Conclusions

These findings indicate that Leishmania infection is the singular factor that perturbs the kidney and liver enzymes considered in this study. Therefore VL does not show association with diabetes or diabetic foot ulcer co-morbidity in the population studied. There has not been any reported case of visceral leishmaniasis in Osun State prior to this study. It therefore suffices that the infectious disease has hitherto remained un- or mis-diagnosed.

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Improving hepatitis C diagnosis: Laboratory intervention by a procedure in one step

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Background-aim

Hepatitis C virus (HCV) is a hepatotropic virus that causes progressive liver damage, which might result in liver cirrhosis and hepatocellular carcinoma. Globally, an estimated 71 million people have chronic hepatitis C infection and approximately 399,00 people die each year from HCV infection. Antiviral medicines can cure >95% of people with HCV infection, thereby reducing the risk of death by access to diagnosis and treatment is low.

In Spain, around 500,000 people have been in contact with HCV and the viremia is estimated at 68%. However, it has been reported that only 40% of infected people have been diagnosed.

The aim of the study was to assess the effectiveness of HCV RNA measurement after the detection of a new case of positive anti-HCV antibodies patient from Primary Care Attention Centers, using a single EDTA blood tube, previously processed for hematimetric analysis.

Methods

This is an observational study of the percentage of positive HCV RNA patients detected during four months use the above mentioned one step procedure, compared with the detection of positive HCV RNA patients the previous four months, when the test was specifically requested by clinicians.