52 - INDEX ANALYSIS OF INTESTINAL PARASITOSIS AND SCHISTOSOMIASIS IN RIVERINE RURAL AREA IN THE MUNICIPAL DISTRICT OF MOGEIRO - PARAÍBA.

MARIA DO SOCORRO ROCHA MELO PEIXOTO[1, 2]
AMANDA OLÍVIA DE A. HYBERNON[2]
DENIZE NÓBREGA PIRES[2]
ALUÍSIO DE MOURA FERREIRA[2]
DANIELE IDALINO JANEBRO[2, 3]
[1]Universidade Estadual da Paraíba;
[2]Faculdade Maurício de Nassau;
[3] Universidade Federal da Paraíba,
Socorrorocha.1@hotmail.com.

INTRODUCTION

Enteroparasites, mainly schistosomiasis, are serious public health problems that persist in developing countries like Brazil (TAVARES e GRANDINI, 1999; REY, 2001). Schistosoma species capable to infect humans are found in 74 developing countries, reaching an average of 600 million people living in areas with risk. It is estimated that about 200 million are already infected by various species of this worm (WHO, 2002).

The Parasites suffer intra-regional variations, depending on the sanitary conditions, educational, social, index of people concentrations, conditions of use and contamination of soil, water and foods, and the ability of evolution of helminthes eggs and larvae and cysts of protozoa in each of these locations (MARQUES et al., 2005).

The transmission, especially schistosomiasis occurs mainly where there are inadequate basic sanitation and scarcity of home water supply or other appropriate sources of potable water, in which, the population depends of the contact with superficial water collections (rivers, lakes, ponds and dams) for their daily activities.

In Mogeiro / PB, some locations have ideal characteristics for the level augmentation of transmission of intestinal parasites, especially schistosomiasis, which transforms in necessity the identification of bearers to be traced strategies to improve the prophylactic measures. In this sense, the objective of this study was to investigate the incidence of intestinal parasites that affect the population of Sitio Gavião in Mogeiro-PB.

METHODOLOGY

The project was submitted to the Committee of Ethics and Research (CEP) of Universidade Estadual da Paraíba, where the same, was only initiate after authorization, according to established demands for the Resolution 196/96 of the National Health Council that guides the practice of human research. The Approval can be confirmed by Platform Brazil, with CAE: 0451.0.133/2012.

The research was realized in the community of Gavião, located in the margins of the Paraíba River in Mogeiro/PB. The municipal district is located in the physiographic zone of Caatinga, in the agreste mesoregion and in the Itabaiana microregion.

It was a field study, tends as strategy the realization of the parasitological exams and questionnaire application for 80 residents in the community of Gavião, in Mogeiro - PB, for rising of information social demographic and epidemic of the intestinal parasitoses and the schistosomiasis.

RESULTS AND DISCUSSION

After the realization of the parasitological exams in the 80 residents of Sitio Gavião and application of the questionnaire about demographic and epidemiological characteristics, the results were represented in the Illustration 1 and Tables from 2 to 4.

The total prevalence of enteroparasitosis in the residents of Sítio Gavião in Mogeiro-PB, was 100% of the analyzed samples (80/80). Most of the residents were infected by one or more species of parasites. In relation to diversity of parasites, 22,50% of the infected people showed monoparasitism, 40%, biparasitism and 37,50%, poliparasitism (Illustration 1).

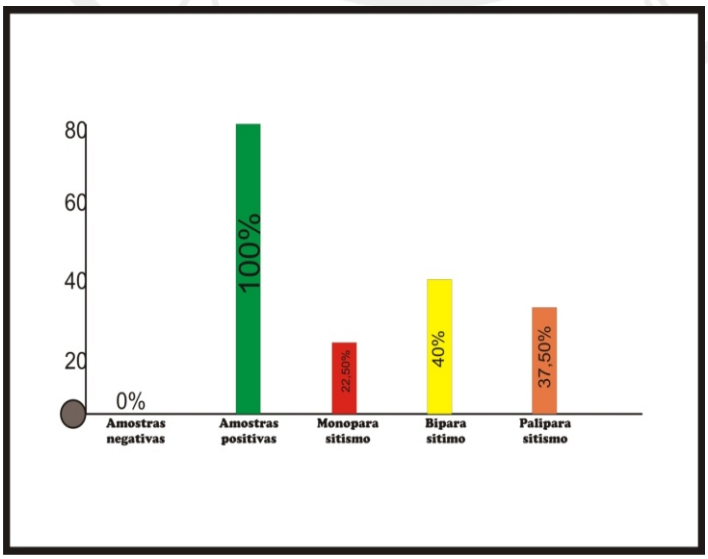

Illustration 1. Enteroparasitosis occurrence in fecal samples of 80 residents of Sitio Gavião - Mogeiro / PB, analyzed by the method of spontaneous sedimentation.

The Table 1 showed the results in relation to helminthes and protozoa found in the studied population, where 45 (56.25%) were affected by Ascaris lumbricoides, 03 (3.75%) for Taenia sp, 02 (2.50%) per Ancilostomids. In relation to the protozoa, 58 (72.50%) showed Entamoeba histolytica in the results, 44 (55%), Entamoeba coli, 25 (31.25%) Giardia sp.

TABLE 1. Frequency of helminthes and protozoa in 80 residents of Sitio Gavião - Mogeiro / PB

ENTEROPARASITES	FREQUENCY	
	N	%
HELMINTOS		
Ascaris lumbricoides	45	56,25%
Taênia sp.	03	3,75%
Ancylostomids	02	2,50%
PROTOZOA		
Entamoeba histolytica	58	72,50%
Entamoeba coli	44	55%
Giardia SP	25	31,25%

Source: Data of the research

The indexes of intestinal parasites found in this study, as shown in Table 1, reveal a profile similar to other riverine rural communities, once, the high frequency of Entamoeba histolytica and Giardia sp in the group studied, evidences the need of preventive measures implementation.

Although a larger prevalence of the Entamoeba coli has been observed (55%) (TABLE 1) which is considered non-pathogenic, it is important to note that these species have the same mechanisms of transmission of other pathogenic protozoa, which may serve as good indicators of the sanitary conditions that individuals are exposed. Although the parasites do not cause any damages to his host, infection by these species has important implications in the epidemiology of parasitic diseases, they reflect the sanitation conditions, lack of sewage, water quality consumption and habits hygiene that theses residents are exposed.

Also in relation to the data in Table 1, there are higher prevalence Ascaris lumbricoides (57.50%), according to the literature the main form of transmission of this parasite is the ingestion of water and contaminated and foods with the eggs of the parasite, besides the habit of taking the hand and objects dirty to the mouth, or even the practice of geophagy (SOGAYAR e GUIMARÃES, 2005), it was also verified a discreet elevation of the frequency of the helminthes in relation to the protozoa.

The predominance of geo-helminthes presented in this research could be related with the life way of the local population. As it is a rural community located in the margins of Paraíba River, the climate is favorable to the spread of these parasites, in addition, also in the region, the practice of agriculture is common, and so it is natural that the habitants of the region have the habit of walking barefoot on the earth, which may have contributed to the results. The species S. mansoni, as expected, was not found in the studied population (0.0%).

Based in research already published in the scientific literature, notice the lack of concrete information about the prevalence of intestinal parasitosis (CARVALHO et al, 2002) and schistosomiasis in different regions of Brazil, especially in the community of Gavião in Mogeiro-PB, the region which was destined this research.

Analyzing the data in Table 2, in relation, to the predominance of parasitized by gender, was observed that there was a predominance of feminine gender in the incidence of protozoa and also helminthes.

TABLE 2 - Results of parasitological exams, according to gender of the population from Sitio Gavião in Mogeiro / PB

PARASITES FOUND	MASCULINE		FEMININE		TOTAL	
TYPE	N°	%	N°	%	N°	%
Entamoeba histolytica	22	27,50%	36	45,50%	58	72,50%
Ascaris lumbricoides	23	28,75%	22	27,50%	45	56,25%
Entamoeba coli	19	23,75%	25	31,25%	44	55%
Giardia lamblia	12	15%	13	16,25%	25	31,25
Taênia sp.	1	1,25%	2	2,50%	3	3,75%
Ancylostomids	0	0%	2	2,50%	2	2,50%

Source: Data of the research

The Table 3 shows the age group of the residents from Sitio Gavião most affected by protozoan and helminthes. The results show that the age group above 28 years was the most affected.

TABLE 3 - Results of parasitological exams, according to age group of the 80 residents from Sitio Gavião in Mogeiro / PB

Parasitosis found	Age							
Type	0 to 12		13 to 28		More than 28		Total	
Entamoeba histolytica	11	13,75%	8	10%	46	57,50%	65	81,25%
Ascaris lumbricoides	5	6,25%	11	13,75%	30	37,50%	46	57,50%
Entamoeba coli	6	7,50%	4	5%	31	38,75%	41	51,25%
Giardia lamblia	5	6,25%	2	2,50%	17	21,25%	24	30%
Taênia sp.	0	0%	2	2,50%	1	1,25%	3	3,75%
Ancylostomids	0	0%	0	0%	2	2,50%	2	2,50%

Source: Data of the research

Multidisciplinary studies accomplished in Brazil have shown specific frequencies in different populations of different intestinal parasites among the juvenile population, with prevalence rates of intestinal parasites in very close indexes found in this investigation.

In relation to the sanitary profile that is represented in Table 4, 100% of the residents living in brick houses with plaster; 100% has no public water supply, 100% of the residents use as a source of drinking water, cisterns and water of the Paraíba River, 100% of waste were disposed of in fossa, and with respect to garbage (100%) of the residents burning the garbage.

TABLE 4. Sanitary profile of the 80 residents from Sitio Gavião in Mogeiro / PB. That answered the questionnaires during the period of November 2012.

OUTCOMES MEASURES	CATEGORY	RESIDENTS (%)
Construction type	Brick with Plaster	80 /(100%)
	Brick without Plaster	0 / (0%)
Public water supply	Yes	0 / (0%)
	No	80 /(100%)
Source of drinking water	Water well / cistern	80 /(100%)
	Water well / artesian	0 / (0%)
	Source/ mine/ waterspring	80 /(100%)
	Mineral water	0 / (0%)
sanitary sewer	Public	0 / (0%)
	Fossa	78 / (97,50%)
	River/Stream/corego	80 /(100%)
	Open sky	2 / (2,50%)
Garbage destination	River/Stream/corego	0 / (0%)
	Burns	80 /(100%)
	Buries	0 / (0%)
	Open sky	0 / (0%)
Registers of cases of schistosomiasis and intestinal parasitosis	Yes	55/ (68,75%)
	No	25/ (31,25)
Acquisition of disease information	Have	60/ (75%)
	Not have	20/ (25%)

Source: Data of the research

The results observed in the Table 1 and 4 are concordant with the results of Brotos and Sabra (2008) that affirmed to be the Entamoeba histolytica is one protozoa with highest incidence, being very common, to discovery in environments without hygiene, providing like this a facility transmission.

Meanwhile, The Health Ministry, through the Sanitary Surveillance (BRASIL, 2005), recognized as true estimate of the World Health Organization (WHO) that indicates to exist worldwide, about one (1) million infected individuals by the Ascaris lumbricoides, being just little smaller the contingent infested by Ancylostomids, between two hundred and five hundred (200 and 500) million that have both, respectively, Giardia lamblia and Entamoeba hystolitica.

According to Katz and Peixoto (2000), the transmission control of parasitic diseases goes beyond the ability of doctors and scientists and should be done with government actions, such as Basic sanitation, water and sewer installation in homes (combat the verminosis of hydric transmission) changes in environmental, health education, combating snails (intermediate hosts of schistosomiasis) beyond the diagnosis and treatment of infected persons.

CONCLUSION

Front to the exhibition of the accomplished study, is evident the precarious profile of the health condition from riverine community of Sítio Gavião in Mogeiro-PB, with relation to the infection index of the intestinal parasitoses, once, this presented extremely relevant cases of the disease.

Note also that most of the residents of the community Gavião are parasitized by the species Entamoeba histolytica, Ascaris lumbricoides, Entamoeba coli, Giardia sp, Ancylostomids and Taenia sp that is a good indicator of socioeconomic, environmental and sanitary health that the residents are exposed.

It was evident that the parasitological exams still a very important procedure for providing epidemiological information necessary to promote measures of intervention, this profile opens space for new studies that have as focus other diseases, with the objetive to establish control measures, improving the quality of life of the population.

REFERENCES

BROTOS, S.S.; SABRA, A.N.A. Response of Schistosoma mansoni having different drug sensitivity to Praziquantel over several life cycle passages with and whitout therapeutic pressure. Journal of Parasitology, Winstom – Salem, USA.94(2).p. 537-541, 2008.

CARVALHO, O.S.; GUERRA H.L.; CAMPOS Y.R.; CALDEIRA R.L. MASSARA C.L. Prevalência de helmintos intestinais em três mesoregiões do Estado de Minas Gerais. Revista da Sociedade Brasileira de Medicina Tropical, Uberaba, MG. v. 35, n.6, p.597-600, 2002.

CAMPOS, R.; PINTO, P.L.S. Avaliação da atividade terapêutica do Albendazol sobre infecções experimental e humana pela Hymenolepis nana. Revista do Instituto de Medicina Tropical de São Paulo. São Paulo, v.32, n.30, p. 185-188,

1990.

KATZ, N.; PEIXOTO, S. V. 2000. Análise crítica do número de portadores de esquistossomose mansoni no Brasil. Revista da Sociedade Brasileira de Medicina Tropical. 33:303-308.

MARQUES S.M.T.; BANDEIRA C.; MARINHO DE QUADROS, R Prevalência de enteroparasitoses em Concórdia, Santa Catarina, Brasil. Parasitologia Latinoamericana. Chile, 60,p.78-81,2005.

NETO, V.A.; MOREIRA, A.A.B.; FERREIRA, G.M.P.; NASCIMENTO, S.A.B.; MATSUBARA, L.;

REY, Luís.Parasitologia: Parasitologia e doenças parasitárias do homem nos trópicos ocidentais. 4° edição Rio de Janeiro:Guanabara Koogan, 2001.

SOGAYAR, M.I.T.L.; GUIMARÃES, S. Giardia. In: NEVES, D.P. Parasitologia Humana. 11º edição. São Paulo: EditoraAtheneu, 2005.14, p.121-126.

TAVARES-DIAS, M.; GRANDINI, A. A Prevalência e aspectos epidemiológicos de enteroparasitoses na população de São João da Bela Vista, São Paulo. Revista da Sociedade Brasileira de Medicina Tropical,Uberaba,MG,v.32,n.1,1999.

WHO, World Health Organization. Geneva: WHO, 2002.

Endereço: Manoel Elias de Araújo, 453
Bairro: Jardim Tavares
Campina Grande-PB
CEP: 58402-022

INDEX ANALL DISTRICTYSIS OF INTESTINAL PARASITOSIS AND SCHISTOSOMIASIS IN RIVERINE RURAL AREA IN THE MUNICIPA OF MOGEIRO - PARAÍBA.

ABSTRACT

Enteroparasitosis, about everything schistosomiasis, are serious public health problems that persist in developing countries like Brazil Given this context, the objective of this research was to study the index of intestinal parasites and schistosomiasis in rural riverside zone from the Sitio Gavião in Mogeiro - PB. Was used a field research, looking through a questionnaire and qualitative and also samples collected from local residents, with the objective to find cases positive for intestinal parasites and schistosomiasis in the locality. The parasitological analysis was realized in 80 individuals using the method of Hoffman. The results showed a prevalence of 100 % (80/80) of infection by intestinal parasites. The parasites with frequently higher were: Entamoeba histolytica (72.50%), Ascaris lumbricoides (56.25%), Entamoeba coli (55%), Giardia sp (31.25%). In Relation with the diversity of parasites, 22,50% of infected people showed up monoparasitism, 40% biparasitism and 37.50% multiparasitism. Data from this research confirmed the precarious condition of health and basic sanitation of the Sitio Gavião in Mogeiro - PB. With regard to schistosomiasis, there was no evidence of the case. this profile opens space for new studies that have as focus other diseases, with the objetive to establish control measures, improving the quality of life of the population.

KEYWORDS: parasitic diseases, schistosomiasis, river community.

ANALYSE DE L' INDICE DES PARASITOSES INTESTINALES ET DE LA SCHISTOSOMIASE LES LONG DES RIVIERES DANS LA REGION RURALE DE LA MUNICIPALITE DE MONGEIRO - PARAIBA

RESUMÉ

Les enteroparasitoses, notamment la schistosomiase, sont de graves problèmes de santé publique qui persistent dans les pays en développement comme le Brésil. Dans ce contexte l'objectif de cette recherche était d'étudier le taux de parasites intestinaux et de la schistosomiase dans la région ruralele le long des rivières appelleé Sítio Gavião de la municipalité de Mogeiro, Paraiba. Nous avons utilisé une enquête sur le terrain à travers un questionnaire qualitative et des échantillons recueillis auprès des résidents locaux afin de tracer le profil des cas positifs pour les parasites intestinaux et pour la schistosomiase dans cette localité. L'analyse parasitologique a été réalisée sur 80 individus en utilisant la méthode de Hoffman. Les résultats ont montré une prévalence de 100% (80/80) de l'infection par des parasites intestinaux. Les parasites avec une fréquence plus élevée etaient: Entamoeba histolytica (72,50%), Ascaris lumbricoides (56,25%), Entamoeba coli (55%), Giardia sp (31,25%). En ce qui concerne la diversité des parasites, 22,50 % des personnes infectées a montré monoparasitism, 40% biparasitism et 37,50 % multiparasitism. Les données de cette étude ont confirmé l' état précaire de la santé et de l' hygiène publique dans l' endroit appellé Sítio Gavião, Mongeiro, Paraiba. En ce qui concerne la schistosomiase, il n'y avait preuve d' aucun cas. Ce profil fait de la place pour des nouvelles études qui se concentrent d'autres maladies afin d'établir des mesures de contrôle visant à améliorer la qualité de vie de la population locale. Ces résultats font de la place pour de nouvelles études qui se concentrent d'autres maladies afin d'établir des mesures de contrôle visant à améliorer la qualité de vie de la population locale.

MOTS-CLÉS: les maladies parasitaires, la schistosomiase, la communauté rivière.

ÍNDICE DE ANÁLISIS DE PARASITOSIS INTESTINALES Y LA ESQUISTOSOMIASIS EN ZONA RURAL EN EL MUNICIPIO DE RIVERSIDE MOGEIRO - PARAÍBA.

RESUMEN

Los parásitos intestinales, especialmente la esquistosomiasis, son serios problemas de salud pública que persisten en los países en desarrollo como Brasil. En este contexto, el objetivo de esta investigación fue estudiar la tasa de parásitos intestinales y la esquistosomiasis en el sitio Gavião en La zona rural del municipio de Mogeiro-PB. Se utilizó un estudio de campo, mirando a través de un cuestionario cualitativa e das amuestras obtenidas de los residentes locales para casos perfil positivo para los parásitos intestinales y la esquistosomiasis en la localidad. El análisis parasitológico se realizó en 80 personas que utilizan el método de Hoffman. Los resultados mostraron una prevalencia de 100% (80/80) de la infección por parásitos intestinales. Los parásitos con más alta frecuencia: Entamoeba histolytica (72,50%), Ascaris lumbricoides (56,25 %), Entamoeba coli (55%), Giardia sp (31,25 %). En cuanto a la diversidad de parásitos, 22,50% de las personas infectadas se presentó monoparasitismo, 40 % biparasitismo y 37,50 %, multiparasitismo. Los datos de este estudio confirmaron la precaria situación de la salud y el saneamiento en el sitio Gavião en Mogeiro - PB. Con respecto a la esquistosomiasis, no hubo evidencia del caso. Este perfil no deja espacio para los nuevos estudios que se centran en otras enfermedades, con el fin de establecer medidas de control para mejorar la calidad de vida. Este perfil deja espacio para los nuevos estudios que se centran en otras enfermedades, con el fin de establecer medidas de control para mejorar la calidad de vida.

PALABRAS CLAVE: enfermedades parasitarias, la esquistosomiasis, la comunidad del río.

ANÁLISE DO ÍNDICE DE PARASITOSES INTESTINAIS E ESQUITOSSOMOSE NA ZONA RURAL RIBEIRINHA DO MUNICIPIO DE MOGEIRO, PARAÍBA.

RESUMO As enteroparasitoses, sobre tudo a esquistossomose, são problemas de saúde pública grave que ainda persistem em países em desenvolvimento como o Brasil. Diante desse contexto o objetivo desta pesquisa foi estudar o índice de parasitoses intestinais e esquistossomose na zona rural ribeirinha do Sítio Gavião no município de Mogeiro, PB. Foi utilizada uma pesquisa de campo, buscando por meio de aplicação de questionário qualitativo e amostras recolhidas de moradores da localidade, a fim de traçar o perfil de casos positivos para as parasitoses intestinais e a esquistossomose na localidade. A análise parasitológica foi realizada em 80 pessoas pelo método de Hoffman. Os resultados demonstraram uma prevalência de 100% (80/80) de infecção por enteroparasitos. Os parasitos com frequência mais elevada foram: Entamoeba histolytica (72,50%), Ascaris lumbricoides (56,25%), Entamoeba coli (55%), Giardia sp (31,25%). Em relação à diversidade de parasitos, 22,50% das pessoas infectadas apresentaram-se monoparasitismo, 40%, biparasitismo e 37,50%, multiparasitismo. Os dados deste estudo confirmaram a precária condição de saúde e saneamento básico no Sítio Gavião em Mogeiro, PB. Com relação a esquistossomose, não foi evidenciado nenhum caso. Este perfil abre espaço para novos estudos que tenham como foco outras doenças, no objetivo de estabelecer medidas de controle, visando melhorar a qualidade de vida da população.

PALAVRAS-CHAVE: parasitoses, esquistossomose, comunidade ribeirinha.