

Recurrent Abdominal Pain and Intestinal Parasitosis. Our Results in a one Year Study.

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Abstract

Background: Abdominal pain in children is the most common problem with which the pediatricians faces in their practice. Recurrent abdominal pain is defined as " the presence of at least three episodes of abdominal pain over a period longer than three months and severe enough to affect the activities of the children". Even though it is considered that functional bowel diseases are the most common cause of recurrent abdominal pain several studies have recognized that numerous organic disorder such as intestinal parasitic infections may lead to abdominal pain.

Aim: The aim of this study is to observe the prevalence and the type of intestinal parasites in a representative sample of children living in the municipalities of Tetova and Dibra.

Materials and methods: Our study was done in a period between January 2018-2019 in the municipalities of Tetova and Dibra. Totally 470 children examined due to recurrent abdominal pain from the pediatrician was subject of this study.

Collected stool samples was checked for the presence of intestinal parasites in microbiological laboratories in Tetova and Dibra.

Results: 470 children were included in our study. 248 of them were girls and 222 boys with a median age of 8.2 years. 67 of the children were positive (14.25 %) for intestinal parasites.

Conclusions: Our study reveals that intestinal parasites were frequent among children in our country. The incidence of intestinal parasitosis is higher among the children who come from families with lower socioeconomic status compared to children who come from families with good conditions. The same situation is related to education, respectively children of educated parents are least vulnerable to intestinal parasitosis.

Keywords: recurrent abdominal pain, intestinal parasite, children

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Full Text

Introduction

Abdominal pain in children is the most common problem with which the pediatricians faces in their practice. These pains often have chronic character and are recognized as recurrent abdominal pain (RAP). Recurrent abdominal pain is defined as " the presence of at least three episodes of abdominal pain over a period longer than three months and severe enough to affect the activities of the children"¹.

The clinical presentation of children with recurrent abdominal pain is the appearance of colic pain mostly associated with functional and autonomic symptoms such as nausea, headache, pallor etc². Even though it is considered that functional bowel diseases are the most common cause of recurrent abdominal pain several studies have recognized that numerous organic disorder such as intestinal parasitic infections may lead to abdominal pain.

The incidence of intestinal parasitosis remain high not only in developing countries but at the same time even in developed ones. This incidence is highest among children and young people and is associated with lack of regular hygiene practices, low economic standing and lack of health education.

Several studies from different authors also emphasize the close connection of intestinal parasitosis with the supply with clean water and water purity, shedding of sewage, appropriate control of sanitary facilities and their distribution, management with waste

pits and landfills and the way of removing and disposing of waste.

Most of children with intestinal parasitosis remain asymptomatic, whereas some of them complain of abdominal pain, weakness, anorexia, nausea, headache and altered bowel symptoms.

Aim of the study

The aim of this study is to observe the prevalence and the type of intestinal parasites in a representative sample of children living in the municipalities of Tetova and Dibra. The data were obtained by the stool examination for intestinal parasites of children involved in this study.

Material and methods

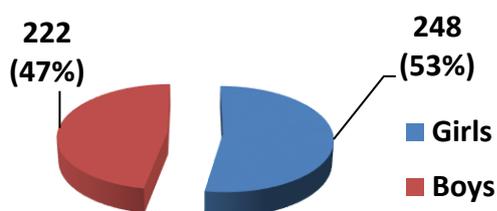
Our study was done in a period between January 2018-2019 in the municipalities of Tetova and Dibra. Totally 470 children examined due to recurrent abdominal pain from the pediatrician was subject of this study. In all the children were performed a fecal analysis for intestinal parasites. From parents of children younger than eight years old was requested to collect a faeces sample from their children, while older children learned how to collect fecal samples themselves.

A relevant demographic and clinical data such as age, gender, level of education, place of life - rural or urban area and main health complaint such as onset and duration of pain were collected by the parents. Collected stool samples was checked for the presence of intestinal parasites in microbiological laboratories in Tetova and Dibra.

Results

Out of the total 470 children included in our study 248 of them were girls and 222 boys with a median age of 8.2 years. Most of the children (360) were school age children respectively more than seven years old (Graphic 1).

Distribution by Gender



Graphic 1: Gender distribution

As far as residence is concerned, 320 children are from the urban areas, whereas 150 from the rural areas. The most of children came from middle

and low socioeconomic families (335) and from parents with a low or secondary education (310) (Table 1).

Epidemiologic data		
Residence	Urban	Rural
	350	120
Socioeconomic status	Low/Middle	Good
	335	125
Education	Low/Middle	High
	300	170

Table 1: Epidemiological data

From 470 children with recurrent abdominal pain and tested for intestinal parasites, 67 were positive (14.25 %). According to our results *Ascaris lumbricoides* appeared to be the most common parasite isolated in

23 children followed by *Giardia lamblia* in 21 patients, *Enterobius Vermicularis* in 13, and *Taenia species* in 10 children (Table 2).

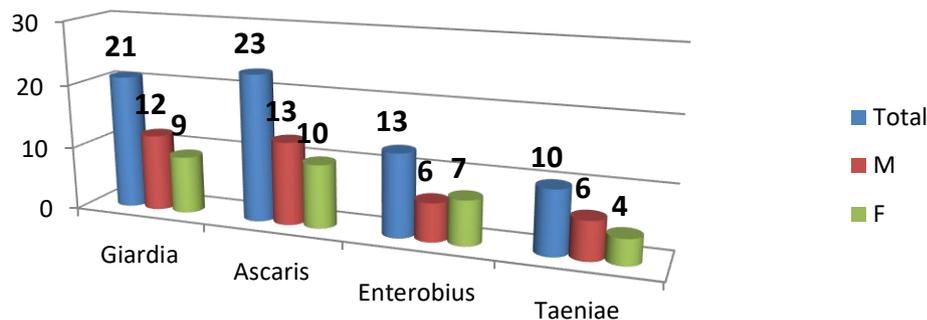


Table 2: Types of parasites and gender distribution

As seen in table 2, boys were found to be more positive than girls and, children of parents with medium or low socioeconomic status was more affected than those who come from wealthy families.

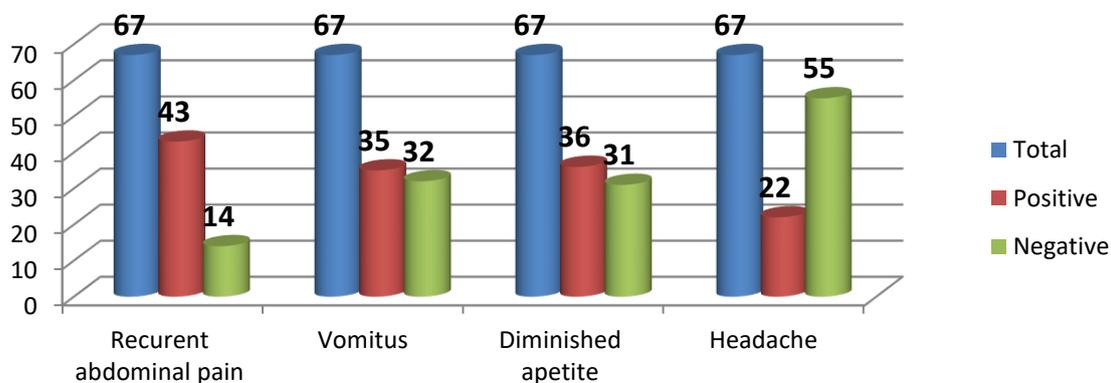
At the same time, children from parents with higher education show lower incidence of infection compared to children of parents with low degree education.

Parents Socioeconomic status & Education		
Socioeconomic status	Low or medium	Good
	41	26
Education	Low or middle	High
	44	23

Table 3: Incidence of intestinal parasitosis by socioeconomic status and education

Among infested children the most common clinical manifestations were recurrent abdominal pain, vomitus,

diminished appetite and headache (Graphic 2)



Graphic 2: Clinical manifestations

Regarding residence it was not any statistically significant differences between children from Tetovo and Dibra

Discussion

The prevalence of intestinal parasites remains high throughout the world. however, their prevalence is much higher in areas with poor hygiene and bad socioeconomic status. In our study we examined 470 children with gastro intestinal disturbance and the microbiologic data show that 14.25 % of them had intestinal parasitic infection. Incidence of intestinal parasitosis in our study is much lower than the incidence reported by some others authors. So Biadun *et al.* (2001) during 24 years study and after examination of totally 2828 children reported a prevalence of intestinal parasitosis from around 45.9 %. Basso *et al.*, from Brazil in a study conducted in 2008 among schoolchildren reported a prevalence of enteric parasitosis from 37 - 89 %. The highest prevalence of IPI among schoolchildren (33.4%) was reported by Aksoy *et al.*, in study realized in Turkey at 2007. In a study in Albania realized by Sejdini *et al.* (2011) the overall prevalence of intestinal parasites was 19.0%.

In another study realized by Gualdieri *et al.* (2011), a totally 514n faecal samples of immigrants in Naples were tested, and the prevalence of parasites resulted to be 61.9 % with the most prevalent species *Giardia intestinalis* and *Ascaris lumbricoides*.

Our study like many other studies show a significant association between intestinal parasitosis in children and abdominal pain. Manifestation of the intestinal parasitosis with stomach pain suggests us to perform examination of the stool for parasites in all children with recurrent abdominal pain.

Many studies performed worldwide like our study show a close relationship between intestinal parasitosis and the poor personal hygiene habits, close physical contact of children between, low socioeconomic status of families, overcrowded families etc.

As reported by some authors⁶, even in our study boys resulted to have a higher prevalence of intestinal parasites than girls. We suppose the reason for this should be that the boys spend more time playing outdoors and are far more in touch with soil or water contaminated by waterborne parasites.

Conclusions

Our study reveals that intestinal parasites were frequent among children in our country. As it is evident in our study the incidence of intestinal parasitosis is higher among the children who come from families with lower socioeconomic status compared to children who come from families with good conditions. The same situation is related to education, respectively children of educated parents are least vulnerable to intestinal parasitosis.

References

1. Apley J, Naish N. Recurrent abdominal pain: A field survey of 1000 school children. *Arch Dis Child* 1958; 33: 165-170.
2. Humphreys, PA, Gevirtz RN. Treatment of recurrent abdominal pain: components analysis for four treatment protocols. *J Pediatr Gastroenterol Nutr* 2000; 31: 47-51.
3. A. Sejdini, R. Mahmud, Y. A. L. Lim, M. Mahdy, F. Sejdini, V. Gjoni, K. Xhaferraj and G. Kasmi. Intestinal parasitic infections among children in central Albania. *Annals of Tropical Medicine & Parasitology*, Vol. 105, No. 3, 241-250 (2011)
4. Gualdieri, L., Rinaldi, L., Petruzzo, L., Morgoglione, M. E., Maurelli, M. O., Musella, V., Piemonte, M., Caravano, L., Coppola, M. G., Cringoli, G. (2011): Intestinal parasites in immigrants in the city of Naples (southern Italy). *Acta Trop.*, 117 (3): 196 - 201. DOI: 10.1016/j.actatropica.2010.12.003
5. Okyay P, Ertug S, Gultekin B, Onen O, Beser E. Intestinal parasites prevalence and related factors in school children, a western city sample-Turkey. *BMC Public Health*. 2004; **4:64**.
6. Bethony J, Brooker S, Albonico M, Geiger SM, Loukas A, et al. Soiltransmitted helminth infections: ascariasis, trichuriasis, and hookworm. *Lancet* 2006; 367: 1521-1532.