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DISEASES OF CHILDREN WITH HELMINTHIASIS AND THE ROLE OF MASS DEWORMING IN CONFRONTATION AGAINST WORMS IN CHILDREN

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SUMMARY

The actual exposure of helminthsis of children under the age of 14 at the primary health care level has been studied. Structural analysis of children's infection rates of helminthasis has been carried out. In particular, by age, by visiting children's institution's, by gender. The tactics of children recovery from helminthiases in primary health care system have been developed. The importance of mass deworming in a sharp decrease in helminthiases is shown. It has been established that a double massive deworming in a short period of time achieves a sharp reduction in the incidence of children enterobiosis and hymenolipediasis. The importance of the level of knowledge and competence of specialists performing laboratory diagnostics of helminthiases is shown.

KEYWORDS: Helminthiasis, enterobiosis, gimenolepidosis, invasiveness, mass deworming.

The importance of the research: More than 250 types of parasitical forms are discovered in man's organism, especially the spread of infections of worm – prothosoy is relatively high.[9] Enterobios, ascaridose, trematosode, trichosefales, hymenolepidose are considered to be widespread, including 89% of enterobios and 6,8% of ascaride. According to the data of parasitologic monitoring, every person during his lifetime particularly at childhood, gets sick with parasitic diseases.[3] The patients diseased with 90-95% enterobios and 65,1% ascaridose are mainly considered children who are at the school age or under the school age.[8]

According to some researches, parasites result in appearance of and exacerbation of chronic process of somatic illnesses thus affecting negatively on a normal immune system.[4] Scientific researches that investigated the link between asthma and parasites are worth deserving. For instance, it is proven that children who got ill with worms have high rates of allergic diseases, such as asthma and atopia.[10]

In accordance with epidemiological researches, in Uzbekistan enterobios and hymenolepidose are spread widely, ascaridose and teniarynchose also can be noticed and patients diseased with echinocock are encountered more. The rate of getting sick with enterobios in children is 20% and even higher.[1,5] Also, the wide spread hymenolepidose is observed and its rate is equally divided between the population of towns and villages.[6]

The aim of the research: In an example of Bukhara region to determine the incidence of helminthiasis among children under 14, to clarify the structural analysis of worm infections among children, to determine the type of helminthosis, age, gender, location and association of children. Development of modern organizational methods for evaluating their effectiveness, preventing and treating deworming among children.

MATERIALS AND METHODS

Scientific researches were conducted in 4 Bukhara regions. Initially, seminars were held to improve the knowledge and practical skills of primary health care and laboratory staff on helminthiasis and their diagnosis. At the next stage, 13,777 children under 14 were examined by trained laboratory technicians for deworming. The analyzes were performed by the method of removal of the Fleulborne, Kato, and perianal folds. Based on the findings of the study, targeted deworming (MD) was carried out in areas with a high incidence of helminthiasis among children. The MD was administered in two rounds: 1-time and 2-time.

RESULTS

In the surveyed areas, the incidence of helminthiasis among children under 14 is 45.3%. There are four types of deworming nosologies among children: enterobiosis, gimenolepidosis, ascaridosis and teniarinhosis. Enterobiosis is common in an organized group of children. The prevalence of helminthias in children is as follows: 4-6 year olds, 6-10 years old, and 1-4 years old. Worms are more common among boys than girls. MD results in regions with high deworming have resulted in a 1-fold mass use of albendazole, and a 16-fold reduction in the incidence.

The most common and noteworthy among children are enterobiosis, ascaridosis, trematodosis, trichocephalosis, and gimenolepidosis, of which 89% are enterobiosis and 6.8% are ascaridosis. According to parasitological monitoring, every person is infected with parasitic diseases throughout their lives, especially during childhood. 90-95% of patients with enterobiosis and 65.1% of ascaridosis occur predominantly in school and preschool age.

According to a number of scientist's, parasitosis causes somatic diseases and exacerbations of chronic processes, affecting the human body in many ways, including the normal functioning of the immune system. Noteworthy is the scientific work highlighting the interdependence of asthma and parasitosis. In particular, it has been shown that children with helminthiasis have higher rates of allergic diseases, asthma and atopi.

According to epidemiological studies, enterobiosis and gimenolepidosis are common in Uzbekistan, there are cases of ascaridosis and teniarinhosis, and it is common in patients with exinococcosis. The incidence of enterobiosis in children is 20% and above. Hymenolepidosis is also widespread, with an even distribution of urban and rural populations.

One of the reasons for the prevalence of teniarhinosis in the Khorezm region is the use of the national cuisine, the "Ijjan", for the local population. This dish is prepared from raw meat mince. There is a correlation between the consumption of this meal and the degree of teniarinhosis in the population. It is common for pregnant women to eat raw meat with hot bread. The high incidence of helminthes in butchers is also due to their consumption of "hot" raw meat.

The mountainous and mountainous regions of Uzbekistan have naturally favorable conditions for the development of their eggs. Their foci recorded in Fergana, Namangan, Kashkadarya and Surkhandarya provinces found that their eggs could survive on the ground for 10 years.

RESULTS

To determine the incidence of deworming among children, 13777 children were tested for deworming in 4 regions of Bukhara (Bukhara city, Bukhara, Kagan and Jondor districts). As a result of the tests, 6,235 children (45.3 ± 0.4%) were infected. Among the patients found, the prevalence was enterobiosis (82.5%), the second was gimenolepidosis (15.7%), the third was ascendidosis (1.1%), and the fourth was teniarinhosis (0.4%) (Figure 1).

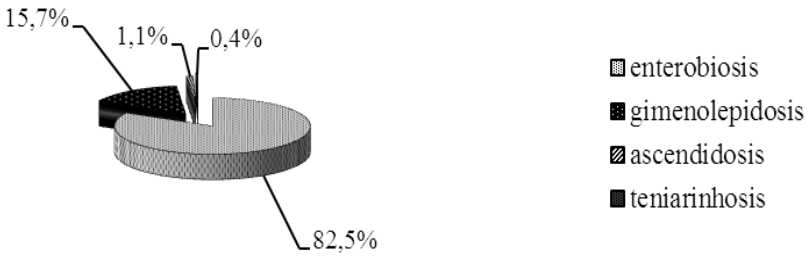

Figure 1: Nosological structure of helminthiasis in children.

6996 boys and 6781 girls were tested among children. The rate of being diseased by worms includes 47,2±0,6% among boys and 43,3±0,6% among girls. The difference of being diseased between genders was 3,9%, showing the high rate among boys. Tested children were classified into groups according to the classification used in pediatric practice: under 1 – infant period, 1-4 years – kindergarten period, 4-6 years – the period till school, 6-10 years – initial school period and 10-14 years – older children. Worms were encountered mostly in children at the age of 4-6 and they were 2939. (figure 2). In the 2nd place children at 6-10 and in the 3rd place children at 1-4 were noted down.

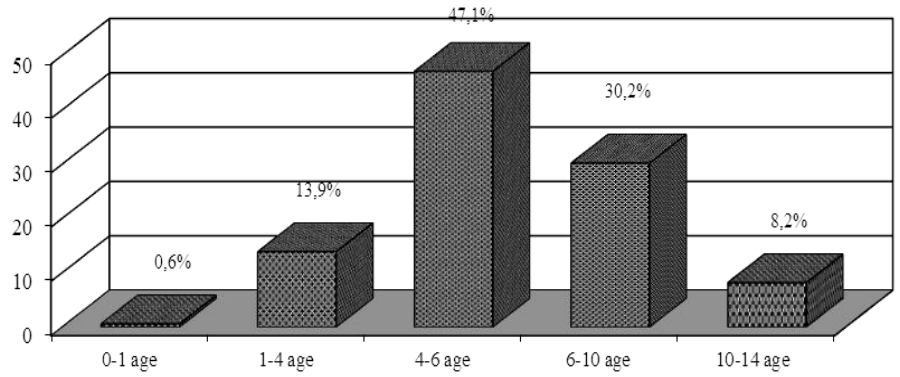

Figure 2: Age distribution of children with helminthiasis.

The study showed that worm infections among children who go to kindergarten or school and children who are being brought up at home, worms among organized children were spread 34,7% while this rate was 10,5% among non-organized children. (figure 3).

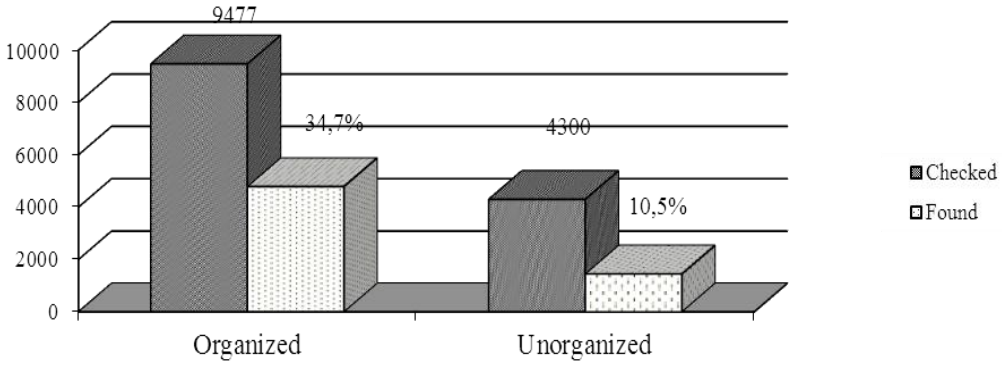

Figure 3: Helmintosis among unorganized and untreated children incidence.

According to the results of one-month follow-up laboratory analysis in the target MD groups, the incidence of helminthiasis decreased from 61.8% to 34.2% as a result of single-dose treatment with albendazole. Laboratory analysis of post-deworming revealed that the incidence of helminthias in children decreased by 96.3% (Figure 4).

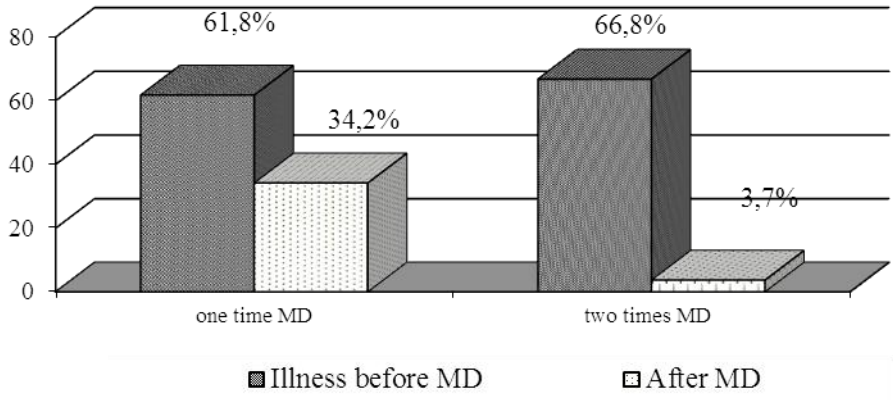

Figure 4: Effectiveness of mass deworming (MD).

DISCUSSION

According to our researches, the incidence of helminthiasis was 45.3% among the contingent surveyed. This is quite different from the official statistics on the disease. There are four types of helminthiasis among children, with enterobiosis first, gimenolepidosis second, ascaridosis, and teniarinhinous. The most common incidence of enterobiosis and its prevalence in an

organized group of children is due to its high contagious nature.

The most common age group of children with helminthiasis is 4-6 years old, 6-10 years old and 3-4 years old. This may be explained by the fact that 4-6 year-olds have increased physical activity and are out of parental control, while children aged 6-10 have developed a certain degree of sanitation and 1-4 year olds are under the supervision of their parents. At the same time, the high prevalence of helminthiasis among boys indicates that they have insufficient sanitation and hygiene skills compared to girls.

According to the results of mass deworming efficacy among children, 1-fold mass use of albendazole in areas with high incidence of helminthiasis reduced the incidence twice and 16 times.

CONCLUSIONS

1. There should be training sessions on the etiology, clinic and principles of helminthiasis among primary health care professionals and children, and with laboratory staff on plans and programs for laboratory diagnosis of helminthiasis.
2. The incidence of helminthiasis among children was 45.3%. This is in stark contrast to the official statistics on the disease.
3. The most common type of helminthiasis among children is nosological forms, the main part is enterobiosis, the second is gimenolepidosis, the third is ascendidosis, and the fourth is thiarinarin.
4. Worm infections are most common in an organized group of children. At the same time, boys are more often than girls (3.9%).
5. The most common age for worms is 4-6 years, followed by 6-10 and 1-4 year olds.
6. One of the main ways to reduce helminthiasis in children is mass deworming, which should be administered twice a week for two to six weeks among children aged 4-6.

USED OF LITERATURE

1. Абдиев Ф.Т., Махмудова Л.Б. Коррекция иммунологических нарушений и дисбиотических процессов при гименолепидозе // IX Республиканский съезд эпидемиологов, гигиенистов, санитарных врачей и инфекционистов Узбекистана, 21-22 мая. – Ташкент. – 2010. – С. 5.
2. Ахмедова М.Д., Умарова А.А. Современные особенности эпидемиологии, клиники, иммунологии микст паразитозов // Инфекция, иммунитет и фармакология. - 2006. - № 5. - С. 12-14.
3. Беэр С.А. Паразитологический мониторинг в России (основы концепции) // Мед. Паразитол. и паразитарные болезни. 2007. № 1. С. 38.
4. Денисов М.Ю. Лечение атопического дерматита // Современные технологии реабилитации детей с аллергодерматозами: (Практич. рукво для врачей) / Под ред. проф. Л.Ф. Казначеевой. Новосибирск. 2003. 112с.
5. Информационное письмо Республиканского ЦГЭСН МЗ РУз «О состоянии мероприятий по профилактике паразитарных болезней в Республике Узбекистан в 2010 году и задачах на 2011 год» №24-8/724 от 14.03.2011 г.
6. Махмудова Л.Б., Саидахмедова Д.Б., Мухитдинов Ш.Т. Основные клинические проявления гименолепидоза у детей // Актуальные проблемы диагностики, лечения и профилактики инфекционных и паразитарных заболеваний. V Международная научно-практическая конференция. - Ташкент. - 2009. - С. 105-106.
7. Ниязматов Б.И., Атабеков Н.С., Абдиев Т.А., Шамгунова Г.Ш. Проблема гельминтозов в Узбекистане // Проблемы биологии и медицины. – 2004. - № 1. – С. 11-12
8. Сергиев В.П., Лебедева М.П., Фролова А. А. Паразитарные болезни человека, их профилактика и лечение // Эпидемиол. и инф. болезни. 2005. № 2. С. 8-12.
9. Токмалаев А.К. Гельминтозы человека // Рус. Мед. журнал. 2004. Том 9, №1617. С.690-693.
10. de Almeida MM. Arede C. Marta CS. Pinto PL. Daniel I. Peres I. Nogueira JA. Pinto JR. Atopy and enteroparasites // Allergie et Immunologie. 2008. Vol.30, №9. P.291-294.