The Dynamic of Incidence and Prevalence of one Parasitic Zoonosis – Amoebiasis in Romania, in 2000-2005 Period

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Abstract. At this hour, both in Romania and international level, parasite diseases are one of the public health problems, carefully looked upon, due to increased prevalence, problems of health – due to the lack of an correct treatment, differential diagnostic issues and not last, of an numerous economics implications.

The settling of annual dynamic, in new amoebiasis cases, within humain population, was made using a data base, given by National Center for Ensuring and Organization of Informational and Informatic System and Health Domain, Bucharest, Romania. The data base is represented by the number of new cases of amoebiasis that appeared annually in the period 2000-2005. Epidemiologic estimation was made through the evaluation of the situation of amoebiasis at national level, pursuing as evaluation parameters, prevalence and incidence of cases in one calendar year/source of reporting epidemiologic data and group study depended on age.

The year with the maximum incidence was 2003 when 5.72 %, of population was affected. The smallest value of the incidence it’s registered at the beginning of study period, when it was about 1.21% for year 2000. In terms of human receptivity, the highest values were noticed in subjects between 15-64 years old, of 72.4%. The spreading incidence of the disease among 65 year old people, had minimal values (P-33.17%).

Key words: amoebiasis, incidence, prevalence, humans

INTRODUCTION

Amoebiasis is known as an acute/cronic protozoosis, affecting all species, human, dog cats and pigs. Do to the increased incidence of the disease, lately amoebiasis has been passed among the parasitologic diseases with high level of importance whthin tropical areas, affecting human along with cats and dogs. Produced by individuals from the entamoebidae family, they represent the etiological component of the disease, the risopodes having their final destination into the big intestin. Symptoms are mainly digestive, taking the form of colitis, acute on set/cronic. Symptoms are usually long lasting diarrhoea. In dogs and cats, (as well as in human and primates) the disease is produced by Entamoeba histolytica.
MATERIALS AND METHODS

The presented study was performed upon the epidemiological data (incidence, prevalence) confirmed by the health local committees, nationally gathered by the National Center for Ensuring and Organization of Informational and Informatic System and Health Domain, Bucharest, Romania.

The study had as main purpose, to establish the numeric incidence in human, in Romania, between years 2000-2005. It took 6 years of research, to follow the dynamic of the disease in hospitals, small practices, specialized ambulatories, all on national level, considering the age as a group factor. (under 1 year; 1-14 years; 15-64 years; over 65 years).

As a research method we have chosen the epidemiologic inquiry, which followed the countable evaluation of the epidemiologic parameters, mainly of the most important ones: incidence, prevalence.

He retrospectiv epidemiological inquiry, used analytical investigations (the statistical workout of the obtained data), from the countable operational research, such as the epidemiological typing. The resulted data were interpreted in respect of the resulting numbers reflecting the incidence and prevalence of amoebiasis in Romania, between years 2000-2005, and after that compressed in the form of panels, to be expressed through the excel program, in their final shape of graphics and diagrams.

There were two directions the study has followed: first purpose was to establish the dynamic of both prevalence/incidence, according to the reporting source (small practices, specialized ambulatories, hospitals etc), and secondarly was to find out the variability of both’s epidemiological indicators value, in respect of the patient’s age. In both cases we did not neglect the temporary variable.

Also the study’s gold was to establish the eventual differences between the incidence/prevalence, seen as possible changeable values, according to the trusted source.

RESULTS AND DISCUSSION

The epidemiological situation of the amibios, is interpreted now with the established value of the incidence/prevalence of the reported cases by the personal practitioners, ambulatories, and released patients, on age groups and annually bases (Tab. 1, fig. 1).

Tab. 1

Prevalence (%) of amoebiasis cases reported by family practices

<table>
<thead>
<tr>
<th>Year</th>
<th>P %</th>
<th>Under 1 age</th>
<th>1-14 years</th>
<th>15-64 years</th>
<th>Over 65 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>27</td>
<td>9</td>
<td>18</td>
<td>69</td>
<td>1.1</td>
</tr>
<tr>
<td>2001</td>
<td>73</td>
<td>73</td>
<td>71</td>
<td>71</td>
<td>0.75</td>
</tr>
<tr>
<td>2002</td>
<td>27</td>
<td>32</td>
<td>25</td>
<td>42</td>
<td>32</td>
</tr>
<tr>
<td>2003</td>
<td>81</td>
<td>77</td>
<td>80</td>
<td>85</td>
<td>30</td>
</tr>
<tr>
<td>2004</td>
<td>39</td>
<td>81</td>
<td>37</td>
<td>37</td>
<td>65</td>
</tr>
<tr>
<td>2005</td>
<td>47</td>
<td>74</td>
<td>41</td>
<td>47</td>
<td>37</td>
</tr>
</tbody>
</table>

| Prevalence % (period) | 58.80 | 69.2   | 54.4   | 72.4   | 33.17 |

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In conformity to the reports from the personal practitioners, it’s been revealed that the amoebiasis prevalence in human has for the year 2003 a maximum of a 81%, and a minimum for the year 2000-2002 of 27%, noticing also a discontinuity within the temporal dynamic of the disease in human.

In terms of human receptivity, the highest values were noticed in subjects between 15-64 years old, of 72.4%. the spreading incidence of the disease among 65 year old people, had minimal values p-33.17% (fig. 2).

Comparing the prevalence of the amibiosis reported by the specialized practitioners from specialized ambulatoryes, during the same period of time and performed among subject
of the same age, was noticeably different from the one reported by the small family practices (fig. 3,4).

Fig. 3. The dynamic of prevalence in amoebiasis (reported by specialized ambulatories)

Fig. 4. The dynamic of prevalence in amoebiasis by group study (reported by specialized ambulatories)

Comparing the prevalence of the amoebiasis reported by the specialized practitioners from specialized ambulatoryes, during the same period of time and performed among subject of the same age, was noticeably different from the one reported by the small family practices.

For people older then 65 years of age, there has been established a maximum of prevalence for the disease, for the year 2002, of 50%.

Comparing all graphics, 1,2,3, 4 a large disparity was noticed, among the results, due to the source of origin, such as family doctors and ambulatory practitioners. The year found to have a minimum of prevalence, 2002, through family doctor’s communicates, represents the year of highest prevalence in conformity to the reports of the ambulatory practitioners. Along with this foundings, were processed and found similar, the values of the cases prevalence in conformity to the age factor.
Amoebiasis incidence, reported for 100,000 people, is monitored annually, based on the age factor, in respect to the epidemiological reports, delivered by the family practitioners practices.

![Graph showing incidence and prevalence of amoebiasis](image)

**Fig. 5. The dynamic of incidence in amoebiasis (reported by family practices)**

The highest incidence was found in year 2003, 5.72%, in respect of the year’s 2000, where the smallest value was noticed and registered.

In year 2003, high numbers were noticed both for incidence and prevalence, therefore, is shown to be exact the fact that the new registered conditions appear with a higher frequency and get resolved in a larger period of time.

**CONCLUSIONS**

In respect of the epidemiologic inquiry performed to quantify the epidemiological indicators, in order to characterize the dynamic of amoebiasis cases among Romanian subjects, between year 2000-2005, and it became possible to establish the difference between the value of the incidence and prevalence of the cases, in respect to the reports coming both from small practitioners practices and specialized practices. Thus, according to the values extracted from small practices, family doctors established for the year 2003 a prevalence of 81%, and a minimum for years 2000-2002 of 27%, meanwhile, the specialized practitioners came out reporting a prevalence of 81% for year 2002.

Also, small differences appear when the age factor is established. Reports of family doctors show high prevalences for subject between 15-64 of age, while the special practices show a maximum of prevalence for people over 65 of age.

The reason why there are differences between the results coming from the same source, was pretty hard to establish. Therefore the difference was thought to be reasoned by the fact that no exact number of the solicitors of medical services is to be found to be exact, since a lot of the subject may not be instructed into presenting for prophylactic consults, annual investigations, or because necessary, for treatment.

Meanwhile, if the year 2003 is epidemiologically evaluated, we find that both incidence and prevalence of amoebiasis have the highest numbers for this year in particular, in respect of the rest of the studied period of time.
Therefore, we can say that amoebiasis in human, in Romania, at least for the year 2003 has had a high frequency along with a prolonged healing period (reflected through the high value of prevalence).

REFERENCES