UNIVERSITY OF MEDICINE AND PHARMACY OF TÂRGU-MUREŞ
SCHOOL OF DOCTORAL STUDIES

RISK FACTORS IN THE GASTRITIS OF CHILDREN

ABSTRACT

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The general part contains data from literature related to both Helicobacter pylori infection and gastritis in children, as well as data about the risk factors that can be involved in the development of these diseases. **The special part** contains the personal study starting with the description of the patients group, continuing with the working method and then with the description of the results obtained by correlating the different clinical and paraclinical parameters, with the identification of risk factors in children gastritis.

Introduction : The study of children and adolescents diagnosed with gastritis represents an overall theme with significant practical implications and there are two significant arguments which support the importance of this theme : the possibility of developing digestive diseases when they become adults and on the other hand the conclusion obtained due to several studies conducted worldwide - that preventing H. pylori infection in childhood is much more efficiently than ulcer treatment in adulthood. **Aim of the study:** is to analyze as much as possible risk factors in the gastritis of children.

Material and method : this study focused on the following objectives - to confirm the role of H. pylori in the etiology of gastritis; to establish the groups of factors that have importance in the etiology of gastritis in children; to research the potential trigger factors of gastritis by assessing in an accurate way the anamnestic, clinic and paraclinic data, but also the eventual individual factors; evaluation of some possible correlation with age, gender, place of origin, nutrition and also hygiene and health habits; the importance of healthy nutrition in children.

In the study there were included 791 children and teenagers from the Pediatric Clinic I and II - Târgu Mureș, in the period of 2008-2011. We initiated the study with determination of H. pylori infection in patients with digestive symptomatology. We had done endoscopic examination in order to see the esogastroduodenal modifications and also for biopsy sampling, in this way we could decide the histopathological diagnosis on the one hand, but on the other hand we could determine H. pylori infection. The next step was to detect the factors associated with digestive symptoms: non-steroidal anti-inflammatory drugs use, family history, nutrition, smoking, and socio - economic conditions. The parents filled in a questionnaire concerning the conditions of living: number of family members, rooms' number, source of the drinking water, sanitary and socio-economic conditions, type of food, feeding schedule, mastication, family history concerning digestive diseases. The type of this study is analytical observational with retrospective data collection. Statistical analysis of data used the Chi-squared test and the Student test, and a value of P less than 0.05 was considered statistically significant.

Results : Frecquency of gastritis in the period of 2008-2011 was of 10,10%, the highest values being recorded in 2008. There is a progressive increase of gastritis cases in children

over the age of 14 (32,74 %), affecting especially the ones with ages between 14-16, with the most frequent cases in females. It was noticed that nodular antral gastritis was the most frequent detected lesion -38,05 %. Chronic gastritis was evidenced in 65,7 % of the cases and is more frequent in adolescents. Helicobacter pylori infection was gained mostly around the age of 10, in females being more frequent than in males. Its symptomatology is complex, but nonspecific, the main symptoms being: epigastric pain (56,64 %), anorexia followed by nausea and vomiting, weight loss, pyrosis. There is a significant relation between H. pylori infection and nodular gastritis. Rapid urease test had a sensitivity and specificity of 92,51 %, respectively 69,62 %. Helicobacter pylori infection is more common in members in whose families there are infected patients (p = 0,0003). Most children coming from families, in which the mother had a history of H. pylori infection, had also a positive serology. There is a high probability to have gastritis symptoms in case of non-steroidal anti-inflammatory drugs use. A poor diet is also considered to be a risk factor in the occurrence of gastritis. More than half of the investigated children had a chaotic meal schedule; but nutrition does not influence the Helicobacter pylori infection : statistically there is not any significant difference between juices/fats consumption in infected and uninfected patients. Poor sanitary conditions represent a risk factor for the H. pylori infection. A low standard of living, high population density (>4 persons in a living space - 72, 65 %), the consumption of well water (40,82 %), the lack of water pipes, are all factors that contribute to intra-familial transmission of this infection. Iron deficiency is quite frequent in children, but it can not be attributed to the increased prevalence of H. pylori infection, p=0, 19; Helicobacter pylori infection and the growth deficiency may have as risk factor a low socio-economic status. Concerning the gastroesophageal reflux disease, we didn't find any significant difference from statistical point of view in patients infected or uninfected with H. pylori (OR 0,66; CI 0,43-0,91; p = 0,0595).

Conclusions: Gastritis is a disease with its certain onset in childhood, sometimes at a young age, but without a specific symptomatology. It is important to know the followings : the age when the child was infected, the infection's risk factors and also the correct transmission way.

NSAIDs consumption is considered to be a risk factor in children gastritis.

Family members with H. pylori infection have an important role in the intrafamilial transmission of this infection, especially from mother to child.

Family history concerning H. pylori infection and gastritis, the consumption of unbottled water, lack of canalization, low socio-economic level are factors that contribute to the transmission of H. pylori infection (p<0, 05).

Key words: gastritis, Helicobacter pylori, children, risk factors

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