



SOME EXTERNAL FACTORS INFLUENCING THE DEVELOPMENT OF CHILDHOOD ASTHMA

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SYNOPSIS

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pregnancy,
breastfeeding.

The study comprises 150 children, who have been diagnosed with asthma, aged 6 to 16, most of which are boys (66, 5%). During the pregnancy one third of mothers were smokers (31%). Out of the total sample, 53% of mothers were breastfeeding their children - 38% up to 12 months, 15 % up to 3 months. Almost one third of those mothers who were breastfeeding up to 3 months were smoking during the whole pregnancy period. It is certain that the first exposition to the allergens, especially to tobacco smoke *in utero*, negatively influences the children's respiratory system. Thus, it is absolutely necessary to stimulate and foster breastfeeding as the best natural medicine – food, as well as a part of asthma treatment.

INTRODUCTION

Asthma is one of the most frequent diseases of small and medium respiratory tract at children. It usually begins at early age, when it still cannot be recognized. Repeated episodes of wheezing can often be noticed in infants, which are usually diagnosed as bronchitis. The wheezing is usually related to acute viral infections of respiratory tract. During viral infections in first three years of life 20 % of children develop mentioned problems, which typically stop as they grow up. 10 % of children have the wheezing repeated in their lungs afterwards, i.e. the asthma appears (JUREKOVIĆ-IVKOVIĆ, 2006).

The research shows that every seventh school child suffers from asthma. Predominance of asthma during childhood points out that it is important to investigate the risk factors. These factors include: internal – genetic inheritance and hypersensitivity of respiratory tract, as well as gender, race and ethnicity and

external – various allergens, dust, pollen, tobacco smoke, obesity, even excessive use of antibiotics (MITCHEL et al, 2007). This condition is mostly of allergic nature, so the attacks are mainly caused by various allergens.

Asthma cannot be cured, but it could be forestalled, especially if there is genetics – the symptoms can be decreased or prevented. Prior to any kind of treatment with relevant medicines, asthma drivers shall be avoided. It sometimes is hard and arduous task, but complete therapy success cannot be achieved without it. Moreover, insufficient removal of allergens from the surrounding is considered to be one of the most frequent causes of therapy failure. Also, breastfeeding is considered to be the best natural way for the prevention of asthma and other allergic manifestations.

AIM

It is widely acknowledged that children of mothers who smoked during pregnancy more often have the recurrent wheezing in the first years of life.

This research considers asthmatic children and aims at identifying the percentage of those who were exposed to aggressive allergens – more precisely tobacco smoke – during prenatal and early postnatal period, as well as the percentage of those at whom the symptoms of the condition were delayed or decreased due to breastfeeding.

MATERIAL AND METHODS

This research comprises 150 children (parents), aged 6 to 17, diagnosed with asthma, undergoing the treatment at the Institute for Childhood Diseases in Podgorica. 66% of children are boys, the rest are girls.

In accordance with the Guidelines for Asthma Treatment and Diagnosis (GINA, 1998), all four types of asthma (intermittent, mild, moderate, and severe persistent asthma) (BETHESDA, 2005) were found in the population which underwent this research.

The data relevant for this study were taken according to a standard allergy and pulmonary survey, by the use of a questionnaire which, besides other things, discovered the data on smoking during pregnancy, after the delivery and during the period of breast feeding.

RESULTS AND DISCUSSION

The research, which comprised 150 asthmatic children, proved that there are more male children – 99 of them or 66% (Fig. 1).

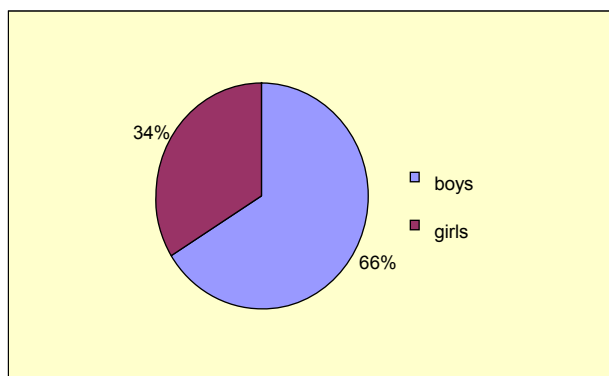


Figure 1: percentage of boys and girls in the total sample.

The questionnaire showed troublesome data concerning smoking during pregnancy (Fig. 2). One third of mothers or 31% were smoking during the whole period of pregnancy. Some other researchers also got similar data, which gives rise to the claim that in this asthmatic population there is always the same percentage of those who actively smoke in their immediate vicinity, *in* or *ex utero* (BOJIĆ et al., 2006; ČOKIĆ, 2006)

Exposure to tobacco smoke encourages respiratory viral infections, including the inflammation of lower respiratory tract and development of allergic sensibility. Moreover, exposure to tobacco smoke *in utero* results in reduction of lung function, which is especially noticed at asthmatic children (Li et al., 2000).

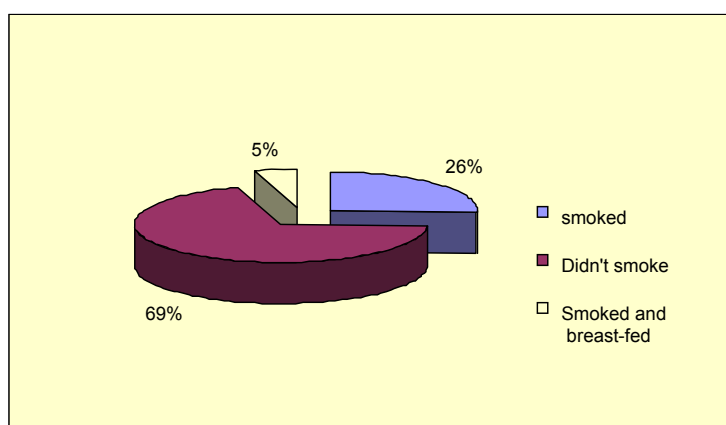


Figure 2: Smoking during pregnancy and after the delivery.

Almost a half of the mothers (47%) which underwent this research didn't breastfeed their children (Fig. 3), 15 % of them breastfed their children for three

months, and 38% breastfed their children for 12 months: 5% of total number of mothers both smoked and breastfed their children after the delivery. The interesting thing is that none of those mothers breastfed their children more than 3 months.

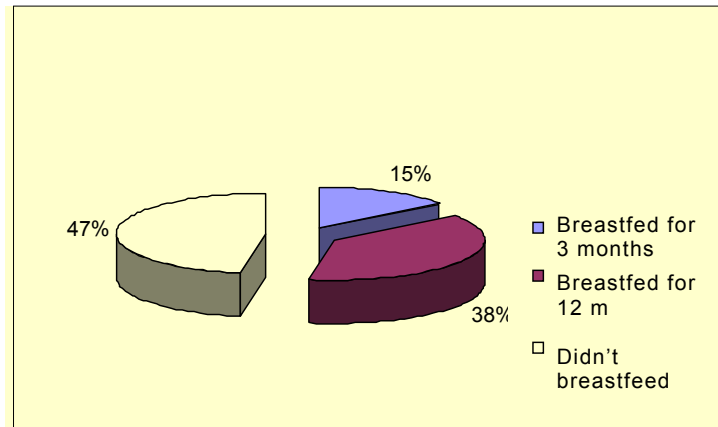


Figure 3: Breastfeeding.

New research shows that breastfeeding may repair the damage with the children whose mothers were smoking during pregnancy. Although that research relates to the impact of tobacco smoke on brain development, and it shows that severe damage is caused to the fetus by exposing it to aggressive tobacco smoke, it also shows that damage may to an extent be corrected by breastfeeding of several weeks. All in all, mother's milk is considered to be the best natural way to prevent many diseases, especially those of allergic nature. (WIJGA et al., 2006)

CONCLUSION

Asthma, with a growing tendency, is a major health, social and economic problem of all countries, especially in children.

Besides the efforts made to educate parents, especially mothers in terms of the damage they impose on their children by exposing them directly or indirectly to tobacco smoke from the very conception, the number of mothers who smoke still represents a sobering thought.

It should be an obligation of all scientific and health workers to use each opportunity to promote breastfeeding as a best medicine – food for general development of offspring, especially in the fight against tobacco smoke as one of the worst and most dangerous allergens, most importantly at children who have genetic predisposition for developing asthma.

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