E-cigarette use and non-pharmacological treatment of bronchial asthma in children.

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Intoduction

Passive exposure or use of e-cigarettes is associated with an increased likelihood of worse asthma control in children. The use of non-medicated agents such as climatotherapy, physiotherapy, is used in the treatment of asthma as with the help of non-medicated agents, better control of the disease can be achieved (reduced exposure to environmental pollution and tobacco smoke).

Aim

A research hypothesis was made that passive exposure to e-cigarette and/or e-cigarette smoking is associated with a weaker improvement in asthma control after sanatorium treatment monitored by FEV1 measurements, Tiffeneau index, ACT/CACT test, ACQ7.

Material and methods

The study group was 130 children aged 5–16 years old (average age: 13.6 years), including 52 girls with diagnosis asthma bronchalie and was treated in three sanatorium centers. Based on the questionnaire data, information was obtained on exposure to tobacco smoke at any time, current exposure in the last 4 weeks to cigarettes and e-cigarettes, current cigarette and e-cigarette smoking.

Results

There was a significant increase in FEV1 and the Tiffeneau index in the studied group ($p < 0.001$),
Analyzing the difference in measurements with the use of the ANOVA test at the beginning and after 4 weeks in the entire study group, a statistically significant difference was found for the FEV_1 ($p = 0.009$) and the Tiffeneau index ($p = –0.028$). In the group of children > 12 years of age a statistically significant difference FEV_1 ($p = 0.0132$) and Tiffeneau index ($p = 0.0128$) was found between the following subgroups of children: non-smokers, e-cigarette smokers, and cigarette and e-cigarette smokers. The improvement results of ACT/CACT by at least 2 points showed a statistically significant improvement for the CACT test ($p < 0.001$) and smoking passive ($p = 0.0472$), but no significant differences was show between the measurements for the ACT ($p = 0.128$), The ACQ7 statistically significant improvement was found taking into account passive smoking ($p = 0.0385$).

Conclusions

Many risk factors for chronic respiratory diseases, including asthma, have been identified, including tobacco smoke. The course of spa treatment of bronchial asthma and the elimination of exposure to tobacco smoke seem to have a positive impact on the clinical effects of non-pharmacological treatment of astma.

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