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HYGIENIC HABITS AND STEROID MYOPATHY IN ADULT-ONSET ASTHMATIC PATIENTS, TAKING INHALED STEROIDS

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Background: Epidemiologic studies consistently showed that microbial deprivation was one of the strongest predictor for asthma onset in pediatric populations. Adult-onset asthma and allergies appear to be highly prevalent in contemporary Russia, however, the contribution of hygienic factors to the asthma development in adult patients was not studied. Almost totally adult asthmatic patients in Russia are treated daily by inhaled steroids from the moment the disease is diagnosed, as this treatment is indicated as safe by medical professionals.

Methods: In the present preliminary study we evaluated 23 adult-onset asthma patients (age of onset ranged from 21 to 71 years old) and 36 controls. We asked subjects to respond to a questionnaire concerning their frequency of shower taking and hand washing. In addition, we used the physician-rated peripheral motor deficits scale, stepper test and ankle/wrist index for assessment of muscle functions.

Results: Nine (39.1%) asthmatic patients reported taking showers twice per day, compared to 2 controls (5.6%; $\chi^2 = 15.4$, $p=0.017$). In addition, sixteen (69.6%) of the asthmatic patients reported very frequent hand washing (≥ 7 times per day), whereas only 6 (16.7%) controls reported less frequent (2 – 6 times per day) hand washing habits. Sixty five per cent of patients using corticosteroids daily during 1 year and longer reported weakness in legs, and 20% of these patients demonstrated objective signs of the muscle weakness. The performance on the stepper test was significantly worse in patients chronically using corticosteroids in comparison with the control group (10.9 ± 3.4 steps vs 16.1 ± 2.4 steps per 10 seconds, respectively; $F=21.6$, $p<0.001$). In addition, a proportion of patients using corticosteroids for at least 18 months were characterized by muscle hypotrophy at a dominant leg.

Conclusion: Our data confirm that excessive hygienic habits are associated with the development of adult-onset asthma. Chronic intake of inhaled corticosteroids induces clinically significant decrease of muscle functions at least after 1-year of daily treatment. Future studies should address the effects of changes of hygienic habits as a method for prevention of bronchial asthma exacerbations.

Biography

Anna G. Polunina is a Senior Researcher of Moscow Research and Practical Center for Narcology (since 1999 - present). She is the Researcher of the Bakulev Research Center for Cardiovascular Surgery (since 2000 - present). She is Scientific Secretary of Moscow Research and Practical Center for Neuropsychiatry (since 2011 - present). She was a Pediatric Neurologist of the Municipal Ambulatory Service N 81 of Moscow Healthcare Department (2012 - 2013).

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