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Long-term prognosis of new adult-onset asthma in obese patients

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Obese patients with new adult-onset asthma often remain obese in the long-term and have more exacerbations and respiratory-related hospital admissions during follow-up. High priority should be given to weight loss during treatment to prevent this outcome. <https://bit.ly/2G5HtRZ>

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ABSTRACT

Background: Obesity has been associated with poor outcomes of asthma in cross-sectional studies, but long-term effect of obesity on asthma remains unknown.

Aims: To study the effects of obesity, found at the time of diagnosis of adult-onset asthma, on 12-year prognosis by focusing on oral corticosteroid (OCS) use and respiratory-related hospital admissions.

Methods: Patients diagnosed with adult-onset asthma (n=203) were divided into three categories based on diagnostic body mass index (BMI) ($<25 \text{ kg}\cdot\text{m}^{-2}$, $25\text{--}29.9 \text{ kg}\cdot\text{m}^{-2}$, $\geq 30 \text{ kg}\cdot\text{m}^{-2}$) and followed for 12 years as part of the Seinäjoki Adult Asthma Study. Self-reported and dispensed OCS were assessed for the 12-year period. Data on hospital admissions were analysed based on medical records.

Results: 12 years after diagnosis, 86% of the patients who were obese ($\text{BMI} \geq 30 \text{ kg}\cdot\text{m}^{-2}$) at diagnosis remained obese. During the follow-up, no difference was found in weight gain between the BMI categories. During the 12-year follow-up, patients obese at diagnosis reported more frequent use of OCS courses (46.9% *versus* 23.1%, $p=0.028$), were dispensed OCS more often (81.6% *versus* 56.9%, $p=0.014$) and at higher doses (median 1350 (interquartile range 280–3180) mg *versus* 600 (0–1650) mg prednisolone, $p=0.010$) compared to normal-weight patients. Furthermore, patients who were obese had more often one or more respiratory-related hospitalisations compared to normal-weight patients (38.8% *versus* 16.9%, $p=0.033$). In multivariate logistic regression analyses, obesity predicted OCS use and hospital admissions.

Conclusions: In adult-onset asthma, patients obese at diagnosis mostly remained obese at long-term and had more exacerbations and respiratory-related hospital admissions compared to normal-weight patients during 12-year follow-up. Weight loss should be a priority in their treatment to prevent this outcome.