Respiratory disease

Asthma persisting from childhood to adulthood presents a distinct phenotype

Asthma that starts in childhood and persists throughout adult life tends to be more severe and is associated with poorer lung function compared with adult-onset asthma, a study from Japan has concluded. The difference in clinical characteristics points to a distinct phenotype.

A total of 1,443 patients, aged ≥18 years with asthma, diagnosed using the Global Initiative for Asthma (GINA) guidelines, were recruited to the cross-sectional study from a large specialist centre in Japan.

Patients were classified into three groups: adult onset; relapsed (remitted childhood asthma that had relapsed) and persistent (asthma that had originated in childhood and was still ongoing). Clinical and laboratory data from electronic patient records were analysed.

A higher proportion of patients in the persistent group (40%) had severe asthma compared with the adult-onset group (31%) and relapsing group (34%); P = 0.015. The percentage of patients using high-dose inhaled corticosteroids in the persistent group (40%) was higher than that in the adult-onset group (29%); P = 0.004.

The percentage of patients with a family history of asthma was significantly higher in the persistent group (64%) than in the adult-onset (36%) or relapsed group (52%); P < 0.001.

The comorbidities of allergic rhinitis and atopic dermatitis were significantly higher in the persistent group than in the adult-onset group; 77% vs 64% and 30% vs 7%, respectively (P < 0.001 for both).

Evidence for chronic airway inflammation in the persistent group was also strong with increased eosinophil counts and IgE levels compared with the adult-onset group.

Spirometry showed reduced % forced expiratory flow at 75% of vital capacity (%FEF_{75}) in the persistent group compared with the adult-onset (P < 0.001) and relapsed groups (P < 0.05), and the %FEV_1 and %FEF_{50} values were lower in the persistent group than in the adult-onset group (P < 0.001).

Because %FEV measurements are used as markers for small airway dysfunction, these results suggest that the impairment of the small airways was greater in the persistent group than the other two groups, which is in agreement with previous studies.

The study authors conclude: 'Adult patients with asthma that has persisted from childhood to adulthood have poorer lung function and more severe asthma in adulthood than those with adult-onset asthma based on our findings.

Asthma that persists from childhood to adulthood seems to present a distinct clinical phenotype of adult asthma, and this should be considered when clinicians attempt to optimise treatment for their adult patients with asthma.'

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To M, Tsuzuki R, Katsube O et al. Persistent asthma from childhood to adulthood presents a distinct phenotype of adult asthma. *J Allergy Clin Immunol Pract* 2020;8:1921-27

Mental health

Evaluating therapies for depression in children and adolescents

Fluoxetine, either alone or in combination with CBT, appears to be the most effective treatment for children and adolescents with moderate to severe depression, a systematic review and network meta-analysis has concluded.

Placebo-controlled and head to head trials of 16 antidepressants, seven psychotherapies and five combinations of antidepressant and psychotherapy were identified from databases and trial registers. Double-blind randomised controlled trials (RCTs) of antidepressant monotherapy and observer-blind or self-rated trials of psychotherapy or combination therapy were included.

Trials involving participants with bipolar disorder or subthreshold, treatment-resistant or psychotic depression were excluded.

Overall, 71 trials with a total of 9,510 participants were analysed. Patients ranged in age from 3 to 20, mean 14 years, and 57.2% were female. Three quarters (75.5%) had moderate to severe depression.

The primary outcomes were efficacy and acceptability, defined respectively as the change in the depression symptom score and the all-cause discontinuation rate.

Only two treatments were significantly more effective than pill placebo, namely fluoxetine; effect size i.e. standardised mean difference (SMD) -0.51 (95% CI: -0.84 to -0.18) and fluoxetine plus CBT SMD -0.73, (95% CI: -1.39 to -0.07). Fluoxetine plus CBT was significantly more