Medical Xpress

Urine metabolomics linked to clinical parameters of asthma

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(HealthDay)—Increased urine metabolomic lipid metabolites are

associated with clinical parameters in non-obese asthma patients, according to a study published online May 18 in *Allergy*.

Claudia Chaves Loureiro, M.D., Ph.D., from the Centro Hospitalar e Universitário de Coimbra in Portugal, and colleagues conducted an observational and exploratory study to examine the correlation between oxidative stress extension, eosinophilic inflammation, and disease severity in asthma patients. Metabolomics was performed using solid phase microextraction followed by comprehensive two-dimensional gas chromatography coupled to mass spectrometry with a high resolution time of flight analyzer.

The researchers established a reduced data set comprising 34 aliphatic alkanes and aldehydes. Obese subjects were excluded from the analysis. Significant models were seen for clinical parameters, including severity of asthma score, forced expiratory volume in one second, and Th2 inflammatory biomarkers (FeNO, blood eosinophils, and seric immunoglobulin E).

"Non-obese asthmatics had increased urine metabolomic lipid metabolites associated with clinical parameters such as lung function, eosinophilic inflammation, and severity," the authors write. "Nevertheless, considering our sample size, the obtained results require further validation using a much larger sample cohort."

More information: Abstract
Full Text (subscription or payment may be required)

parameters.html