ANNALS OF GENERAL PSYCHIATRY

MEETING ABSTRACT Open Access

Increased levels of ethane, a non-invasive, quantitative, direct marker of n-3 lipid peroxidation, in the breath of patients with schizophrenia

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From 1st International Congress on Neurobiology and Clinical Psychopharmacology and European Psychiatric Association Conference on Treatment Guidance
Thessaloniki, Greece. 19-22 November 2009

Background
This study directly assessed whether there was a change in the level of exhaled ethane, which provides a non-invasive, quantitative, direct measure of n-3 lipid peroxidation, in the breath of patients with schizophrenia.

Materials and methods
Samples of alveolar air were obtained from 20 subjects with schizophrenia and 23 age- and sex-matched healthy control subjects. The air samples were analyzed for ethane using mass spectrometry.

Results
The mean level of ethane in the schizophrenia sample (5.15 (S.E. 0.56) ppb) was significantly higher than that of the healthy controls (2.63 (S.E. 0.31) ppb; $p < 0.0005$). A further sub-analysis showed that nicotine dependence was unlikely to be the cause of this difference.

Conclusions
These results suggest that the measurement of exhaled ethane levels may offer a non-invasive direct marker of increased n-3 lipid peroxidation in schizophrenia.

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Published: 22 April 2010

doi:10.1186/1744-859X-9-S1-S150
Cite this article as: Puri *et al.*: Increased levels of ethane, a non-invasive, quantitative, direct marker of n-3 lipid peroxidation, in the breath of patients with schizophrenia. *Annals of General Psychiatry* 2010 **9**(Suppl 1): S150.

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