

EXHALED MARKERS OF INFLAMMATION IN SARCOIDOSIS

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Sarcoidosis is a multisystem granulomatous disorder of unknown aetiology. However, inflammation seems to play an important role. In this study we hypothesised that markers of inflammation can be detected in exhaled air and exhaled breath condensate from patients with sarcoidosis. We measured exhaled nitric oxide (NO) by chemiluminescence analyzer (Logan Research, UK) and assessed 8-isoprostane, TNF α and leukotriene B₄ (LTB₄) by enzyme immunoassay (Cayman, USA) in exhaled breath condensate from patients with sarcoidosis (mean age 43 \pm 6 yr, 12 male) and compared them with healthy subjects (mean age 39 \pm 13 yr, 10 male). There were significantly higher levels of eNO in sarcoidosis patients compared to healthy controls (23.9 \pm 4.1 vs. 5.3 \pm 0.3 ppb, $p < 0.001$). 8-isoprostane levels in exhaled breath condensate were higher in sarcoidosis patients compared to those from healthy subjects (28.6 \pm 2.4 vs. 14.7 \pm 3.0 pg/ml, $p < 0.01$). Unexpectedly, LTB₄ concentrations in exhaled breath condensate were lower in patients with sarcoidosis compared to healthy subjects (14.5 \pm 2.0 vs. 48.5 \pm 11.9 pg/ml, $p < 0.01$). TNF α was undetectable in exhaled breath condensate from both, healthy and sarcoidosis groups. We conclude that sarcoidosis is inflammatory lung disease and that it is not related to neutrophil infiltration and activation.