

SERIAL FRACTIONAL EXHALED NITRIC OXIDE MEASUREMENTS MAY HELP TO IDENTIFY IMMUNOLOGIC OCCUPATIONAL ASTHMA IN CASES WITH COMPLEX EXPOSURES

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Serial measurements of fractional exhaled nitric oxide (FeNO) at home and at work have been described to provide complementary information for the diagnosis of occupational asthma (OA) when challenges are missing or doubtful. So far, increases of FeNO have only occurred with substances known to induce immunologic OA. We describe two cases in which serial FeNO measurements enabled the detection of probable OA after complex exposures.

A 25-year-old industrial painter with exposure to a variety of paints suffered from work-related airway symptoms since 5 years. Lung function was normal, and he was not atopic. Inhalation challenge with hexamethylene diisocyanate was negative.

A 47-year-old sign maker (screen printing, foils) suffering from work-related dyspnoea since 7 years. Moderate airway obstruction, but no atopy were detectable. Due to the complex exposures an inhalation challenge was not performed.

Both patients performed FeNO measurements once daily during a 2-week-holiday and a subsequent 2-week-work period. In both cases elevated baseline FeNO decreased to normal (25 ppb) during holidays and increased after resuming work (case 1: 130 ppb, case 2: 45 ppb).