

## Interstitial lung diseases

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### Chronic eosinophilic pneumonia (CEP) as an adverse reaction of Nitrofurantoin

*Ahmad Alkhatib<sup>1</sup>, Urte Sommerwerck<sup>1</sup>, Kurt Rasche<sup>1</sup>*

*<sup>1</sup>HELIOS Universitätsklinikum Wuppertal, Bergisches Lungenzentrum - Klinik für Pneumologie, Allergologie, Schlaf- und Beatmungsmedizin, Wuppertal, Germany*

**Background:** The chronic eosinophilic pneumonia goes along with lung infiltrations as well as eosinophils in the lung tissue, Sputum and in the bronchoalveolar lavage (BAL). Medications' adverse reactions are one of the causes for the CEP, that presents either as an acute (> 80%) or chronic (< 20%) pneumonia.

**Care Report:** a 75 years old patient presented with progressive dyspnea by exertion and fatigue since 14 Days. Under self catheterization by neurogenic bladder, he suffered from recurrent urinary tract infections (UTI), and he started to use Nitrofurantoin since 35 days. Bilateral basal crackles could be heard by auscultation. Chest X-Ray revealed bilateral peripheral consolidations. The pulmonary function test showed a moderate restriction with a total lung capacity (TLC) of 3,2 l (45%) and forced vital capacity (FVC) of 1.97 l (50%). A hypoxemia in the arterial blood gases (ABG) put the patient on an oxygen therapy with 2 l/min at rest and 5 l/min by exertion. The BAL presented with eosiniphilia of 45%. Mild elevated transaminases, CRP and eosinophilis from 6% with normal Leukocytes as well as ANA-Titer from 1:640 were found in the blood tests. These findings together with the history lead to the diagnosis of CEP. After stopping the Nitrofurantoin and starting the treatment with 40 mg/day prednisolone per os for 4 weeks, the TLC has been increased to 4.52 l (+19%) and the FVC to 2.77 (+19%). There was no need for continuing oxygen therapy.

**Conclusion:** Nitrofurantoin is an antibacterial agent that is frequently used in the management of uncomplicated UTI. But this medication can induce an acute or chronic pulmonary injury as a rarely (<1%) but the most severe adverse reaction. The prognosis is good if the diagnosis is made early and Nitrofurantoin exposure is stopped. Among patients with chronic reactions, the recovery may take 2 weeks to 3 months.