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## An Acute Idiopathic Nonspecific Pneumoniae Case with Dramatic Response to Treatment

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Non-specific interstitial pneumonia (NSIP) is a type of interstitial idiopathic interstitial pneumonia (IIP) that predominantly affecting female never-smokers. Here we described a case of NSIP presenting with acute respiratory failure treated successfully with corticosteroids. A 45-year-old female patient presented with dyspnea that started 15 days ago and admitted to the outside clinic with pneumonia diagnosis. Despite treatment, no clinical radiological response seen and referred to our center. She had no history of illness and using drugs. Her vital signs were as follows: blood pressure 120/70 mmHg, heart rate of 80 bpm respiratory rate of 18 breaths/min, and oxygen saturation of 94% (with nasal 2lt/min O<sub>2</sub>). On clinical examination, inspiratory rales were recognised in bilateral middle and lower zone. Posteroanterior chest X-ray revealed non-homogeneous density increase in bilateral middle and lower zones. Thorax CT revealed presence of reticular densities and ground glass opacity with irregular shape in the middle and lower zones bilaterally. An arterial blood gas obtained when the patient using a nasal cannula with an oxygen flow of 2L/minute and shows pH 7.51, pCO<sub>2</sub> 34.6 mmHg, pO<sub>2</sub> 55.5 mm Hg, BE 4 mmol/L -7, HCO<sub>3</sub> 27 mmol/L, O<sub>2</sub>sat 91.8%. A complete blood count (CBC) showed white blood cells (WBC) of 17.59 10<sup>3</sup>/μL, neutrophil count of 15.01 10<sup>3</sup>/μU (85%), eosinophil count of 0 (0%), Hb of 10.8 g/dL and platelet count of 428 10<sup>3</sup>/μL. Sedimentation rate was 60 mm/h, CRP value 17.5 mg/L, procalcitonin value 0.110 ng/ml. Other biochemical parameters were normal. Serum antiCMV Ig M negative, antiCMV Ig G positive, galactomannan antigen was negative. The routine sputum culture grew only normal oral flora and 3 consecutive negative sputum acid fast bacillus (AFB) smear examinations. Nasal swab viral panel evaluated as negative. Fiberoptic bronchoscopy was performed, both bronchial system were normal, bronchial lavage was taken. Bronchial lavage nonspecific culture, AFB examination, tuberculosis PCR, fungal culture were negative. Imipenem 500 mg 4\*1 iv, trimethoprim sulfamethoxazole 400 mg/80 mg 3\*2 iv were given. Despite treatment, she had worse clinical radiological outcomes. Video-assisted thoracoscopic (VATS) biopsy was performed, biopsy was taken from left lower lobe and evaluated as mixed type nonspecific interstitial pneumonia with organised pneumoniae. 80 mg/day methylprednisolone iv was started. Oxygenation improved, radiological response were seen. NSIP may have an acute or subacute presentation, corticosteroids are the major therapy for acute/subacute interstitial pneumonia. We wanted to share our case because of a dramatic reaction to systemic steroid therapy in NSIP.

**Keywords:** NSIP, interstitial, acute respiratory failure