

Images in clinical medicine



Pulmonary alveolar proteinosis revealed by lung biopsy

 Nasuhi Engin Aydin

Corresponding author: Nasuhi Engin Aydin, Department of Pathology, Izmir Katip Celebi University, Ataturk Hospital, Izmir, Turkey. nasuhiengin@gmail.com

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Pulmonary alveolar proteinosis revealed by lung biopsy

Nasuhi Engin Aydin^{1,&}

¹Department of Pathology, Izmir Katip Celebi University, Ataturk Hospital, Izmir, Turkey

&Corresponding author

Nasuhi Engin Aydin, Department of Pathology, Izmir Katip Celebi University, Ataturk Hospital, Izmir, Turkey

Image in medicine

A previously healthy 40-year-old man with a recent shortness of breath and bilateral hilar based hazy opacities infiltrations of the lungs on radiology was submitted to a VATS biopsy for differential diagnosis. Microscopic sections of the lung biopsy showed granular eosinophilic acellular, alveolar consolidations with unremarkable alveolar walls. These alveolar secretions were strongly periodic acid-Schiff reaction with diastase (PAS-D) positive, revealing their proteinaceous nature, distinguishing them from simple transudates (i.e., edematous or inflammatory). This typical diffuse positive reaction with PAS staining is due to accumulation of large amounts of surfactant apoprotein. Methanamine silver

stain was negative, ruling out *Pneumocystis jirovecii* and fungal organisms. The patient was diagnosed as having alveolar proteinosis both clinically and pathologically. Although the diagnosis can be made by bronchoalveolar lavage

(BAL) yielding a milky fluid, this condition may also be accompanied by tuberculosis, acute silicosis, nickel exposure, and other diseases, so having a lung biopsy is beneficial in eliminating additional conditions.

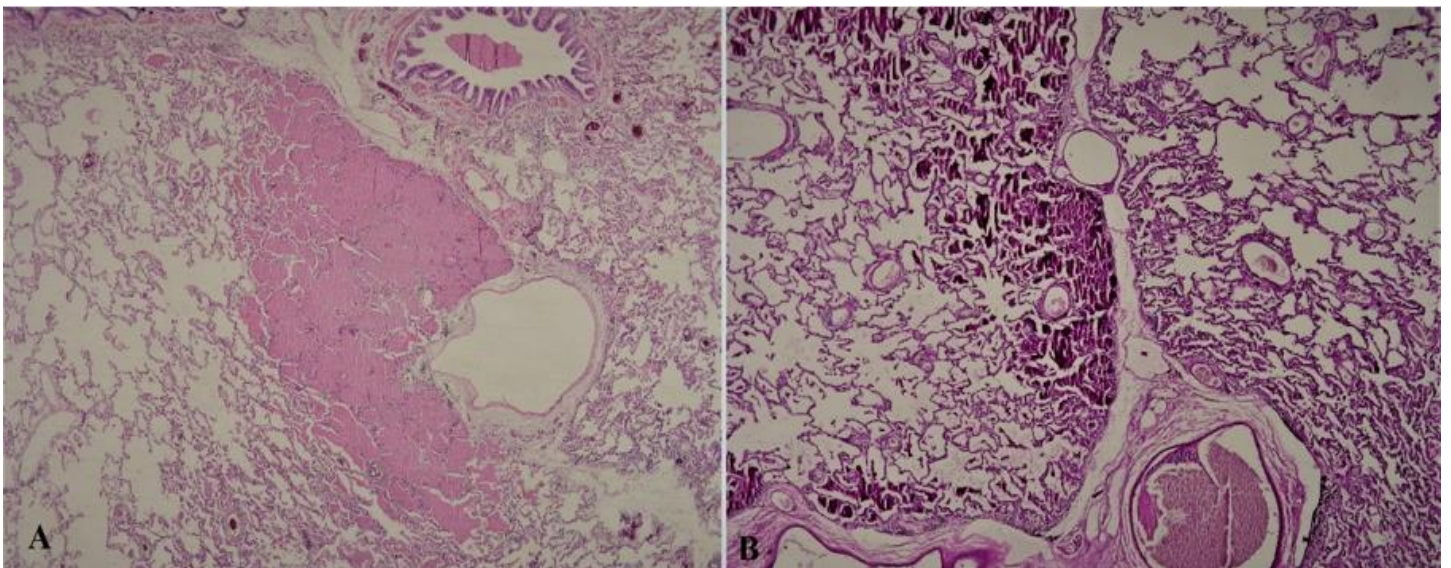


Figure 1: A) lung tissue showing consolidated focus filled with alveolar eosinophilic homogeneous material (Hematoxylin and eosin x100); B) PAS stain with diastase digestion revealing positive reaction as deep purple (magenta), (PAS-D, x200)