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## A Rare Case: Rapidly Progressive Diffuse Alveolar Hemorrhage Associated with Low Molecular Weight Heparin

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A 49-year old female with a ten- year history of chronic obstructive pulmonary disease (COPD) refer to emergency servise complaining of dsypnea. Chest auscultation revealed severely decreased amplitude in both lungs. The patient's oxygen saturation was 70% in room air, yet %92 with nasal 2lt\dk O2 support. The laboratory data showed wbc:5.38K\ uL, hgb:15.4g\ dL, plt:141k\ uL, crp:47 mg\L, grf:89 ml\dk; arterial blood gas (ABG) pH: 7.36, pCO2:42 pO2: 40 sO2:%80 levels. Chest radiograph showed the presence of hyperinfiltration and crowding vasculature. There was no evident sign of consolidation. Chest CT angiography revealed no sign of filling defect in pulmonary truncus, both pulmonary arteries and lobar arteries. Lower lobe basal segmental arteries were not be able to detect due to breath-hold artifacts. Tree-in-bud appearance in right lower lobe laterobasal segment, and bilateral interlobular septal thickening were present. Patient admitted with COPD exacerbation. Salbutamol-ipratropium bromide nebulous 4x1, budesonide 2 mg nebulous 2x1, clarithromycin 500 mg oral 2x1, ampicillin-sulbactam iv 4x1gr was started. Because of patient's progressive dsypnea, hypoxia and suspicious subsegmental angiographic images, enoxaparin sodium 6000 IU\mL subcutaneous 2x1 therapy were added. Patient recovered from hypoxia and dsypnea, crp levels were dropped off; yet eighth day of admission patient had a sudden right flank pain. Approximately 100 cc hemopytsis occurred right after. Physical examination discovered no significant abnormality beside bilateral basal and mid zone amplitude decrease. Chest radiography showed a newly-appearent consolidation zone at the right lower lobe. Urgent thoracic ct angiography required. Alveolar opacities in the total of right lower lobar segment; left lower superior an basal segment; left upper lobe superior-inferior segments were appeared during one-week follow up period. ABG levels were ph:7.41 pcO2:49, hcO3:31, pO2:41, sO2:85. Patient was transferred to intensive care unit (ICU) with possible alveolar haemorrhage diagnosis due to deteriorating condition and hypoxia. Patient was entubated due to %70 saturation despite 5lt\dk oxygen support. Thus deepened respiratory acidosis and hemoglobin decrease to 12.8 mg\dL level under mechanical ventilation, control chest x-ray demonstrate significant advance in consolidation zone. Ten hours after her ICU transfer, it is find out that patient did not respond to cardiopulmonary resuscitation and declared death. We present a case with sudden-emerged diffuse alveolar haemorrhage after LMAH treatment which has no history of rheumatological-autoimmune disease, bleeding diathesis, or anticoagulant medication use with absense of anemia and thrombocytopenia. Anticoagulation related DAH is uncommon after LMAH use, literature is limited with few case reports. We report the first case that resulted with mortality within ten hours after LMAH, depite other examples were clinically recovered after cessation, to the best of our knowledge.

**Keywords:** Diffuse alveolar hemorrhage, low molecular weight heparin (LMAH), enoxaparin