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## Comparison of Low Dose Thrombolytic Therapy and Low Molecular Weight Heparin Therapy in Patients with Submassive Pulmonary Thromboembolism

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**Objectives:** The aim of this study is, establishing the differences, in mortality rates, hemodynamics, hemorrhagic complications, recurrence in six month period and recent pulmonary hypertension ratios (between two group of patients) with submassive pulmonary thromboembolism, treated with half dose tissue plasminogen activator (tPA) (50 mg alteplase/2 hour) plus low molecular weight heparin (LMWH) and only LMWH.

**Methods:** Patients diagnosed with submassive pulmonary embolism in Ondokuz Mayıs University Medical Faculty Hospital between December 2014 and January 2018 treated with half dose tPA plus LMWH (n=38) and only LMWH (n=38). Maintenance therapy has continued with oral anticoagulants and LMWH in two groups. Symptoms, risk factors, vital signs, electrocardiographic findings have been recorded; blood gas analysis, cardiac biomarkers, chest x-ray, ventilation perfusion scintigraphy, venous doppler ultrasound of lower limbs, echocardiography and computed tomography pulmonary angiography, Wells scores, modified Geneva scores, mMRC scores, PESI and sPESI have been evaluated. Pulmonary arterial obstruction indexes are compared between two group.

**Results:** Mortality rate and hemodynamical decompensation in first 7 and 30 day period, was less in half dose tPA group (respectively p=0.028 and p=0.009). There was no significant difference between two group in recurrence and pulmonary hypertension after six month (p=1.000 and p=0.0778). No intracranial hemorrhage was detected in two group. There was no significant difference in major or minor hemorrhagic complications between two group.

**Conclusion:** Current study shows that half dose tPA prevents mortality and hemodynamic worsening successfully, in first 7 and 30 day period, compared with LMWH in patients with submassive pulmonary thromboembolism. According to our findings, we recommend half dose thrombolytic therapy, regarding better survival rates and less hemorrhagic complications, hemodynamic decompensation and less mortality in this group of patients.

**Keywords:** Half dose thrombolytic therapy, low molecular weight heparin, submassive pulmonary thromboembolism, venous thromboembolism