

**The Role of Matrix Metalloproteinase 2 and 9 Enzymes in Developing
Chronic Thromboembolic Pulmonary Hypertension**

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Study Protocol

The study was planned prospectively. 48 patients were included in the study by performing power analysis.. Groups were divided into two equal parts.24 cases(Group 1) and 24 controls (Group 2).

The first group is the case group, patients who underwent pulmonary thromboendarterectomy due to CTEPH. From these patients, blood samples were taken into two blood tubes before starting the operation in the operating room, and 5 cm³ samples were taken from the endarterectomy material removed from the pulmonary artery during surgery. These patients are the patients who will undergo pulmonary endarterectomy operation. Patients who required other surgical interventions other than PTE such as aortic valve replacement and coronary bypass were not included in the first group. Patients with coronary carotid and peripheral arterial disease were not included.

The second group is the control group, patients who underwent pneumonectomy or lobectomy for a reason other than CTEPH. The safe pulmonary arteries from the diseased lung segment removed during surgery were taken. Patients with high pulmonary artery pressure were not included in the second group.

The collected tissues were transported in nitrogen tanks and stored in -80 degrees refrigerators.. Serum obtained by centrifugation of blood at 4000 rpm were stored in -80 degrees refrigerators.

Mmp2 and Mmp 9 enzyme concentrations in serum and tissue were studied by western blot and eliza tests.