



CLOPIDOGREL USE IN ANTIPLATELET MANAGEMENT OF ESSENTIAL THROMBOCYTHEMIA (TECLA STUDY): DESIGN AND FEASIBILITY OF A SINGLE-CENTRE STUDY

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Background. Essential Thrombocythemia (ET) is characterized by enhanced platelet generation and high risk of both arterial and venous thrombosis, as the leading cause of morbidity and mortality. Thus, chronic low-dose aspirin is recommended for primary and secondary thrombosis prevention. In ET, the accelerated platelet turnover has been shown to reduce the stability and degree of platelet inhibition by standard low dose aspirin given once-daily, due to the increased daily regeneration of the drug's target. Clopidogrel, a thienopyridine prodrug, given once-daily is used in case of aspirin allergy or intolerance, for primary and secondary thrombosis prophylaxis in ET patients. Similar to aspirin, clopidogrel active metabolite acts irreversibly, and its target is the P2Y₁₂, ADP receptor. Whether clopidogrel given once-daily can produce a steady and optimal 24-hour inhibition of platelets is currently unknown. Our study has different aims: 1. Measure the degree of platelet inhibition in patients affected by ET receiving clopidogrel and in a non-ET population with an indication for clopidogrel therapy due to cardiovascular disorders; 2) to compare the capacity of two

different platelet function methods to detect the pharmacodynamics of clopidogrel ex vivo.

Methods. A total of 25 adult patients with Essential Thrombocythemia (ET) and 25 age- and sex-matched non-ET patients on standard clopidogrel (75 mg) once-daily will be enrolled. All patients will be instructed to take the clopidogrel tablet always at breakfast time, for 7-10 days. ADP-induced platelet aggregation in whole blood (Verify Now-P2Y₁₂) and in platelet-rich plasma will be measured. At the morning routine visit a blood sample will be collected 24 hours after the last intake of clopidogrel for platelet aggregation testing.

Results. This study has received the approval of the Local Ethical Committee. The first patient was studied on 31th March 2026. At present, 16 patients gave their informed consent.

Conclusions. This study will verify the hypothesis that the same mechanisms reducing aspirin responsiveness in ET patients may also contribute to a reduced ADP induced platelet inhibition under standard clopidogrel 75 mg OD.