

Anti-phospholipid antibodies (APA) positivity could predict response to Rituximab in chronic immune thrombocytopenic purpura (cITP) of childhood

Giovanni Amendola, Rosanna Di Concilio, Maria Amendolara, Giovanna d' Urzo, Lucia Esposito, Gaetano Pinto, Anna Maria Aurino, Ida Tortora, Anella Bello.

Department of Pediatrics and Neonatal Intensive Care Unit, Division of Pediatric Hematology-Oncology, Nocera Inferiore Hospital (SA), Italy.

The study population included all the 25 patients treated with Rituximab (375mg/m² weekly for 4 doses) for primary refractory cITP. Clinical characteristics were: 10 M, 15 F; mean age at diagnosis of ITP: 7 years and 4 months (range: 8 months-15 years and 11 months); mean age at Rituximab: 10 years and 2 months (range: 1 year and 3 months-17 years and 9 months); mean duration of ITP before Rituximab: 3 years (range: 6 months-15 years and 1 month); mean previous treatments: 3 (range: 2-6); none was splenectomized. Before Rituximab a complete immunologic evaluation was performed, including: serum immunoglobulin, lymphocyte subpopulations, ANA, APA (lupus anticoagulant, anti-cardiolipin, anti-β₂-glycoprotein), anti-thyroid antibodies, direct anti-globulin test. Results: 1 year after Rituximab 8 complete response (CR: PLT>150,000/mm³), 3 partial response (PR: PLT>50,000<150,000) and 14 no response (NR: PLT<50,000) were observed; subsequently, there were 3 relapses (2 in CP patients, at 1 year and 2 months and 3 years and 7 months follow-up, respectively, and 1 in PR patients at 2 years and 4 months), with an overall response (CR+PR) observed in 8 patients (32% of the whole population) with a mean follow-up of 8 years (range: 2 years and 6 months-10 years). Serum immunoglobulin and lymphocyte subpopulations were normal in all patients; anti-thyroid antibodies were positive in 1 patient (NR); anti-globulin test was mildly positive in 2 patients (1 NR and 1 CR); ANA were positive (>1:40) in 9 patients (4 NR, 3 CP, 2 PR); lupus anticoagulant was positive in 3 patients, 2 CP and 1 PR, with a persistent response at last follow-up (October 2015); in 2 of them ANA were also positive.

Conclusion: The results of this retrospective study, although including a small number of patients but with a very long follow-up, showed that unlike other tests of autoantibodies related to different disorders APA positivity could predict response to Rituximab in pediatric cITP.