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COST-EFFECTIVENESS OF MAINTANCE THERAPY WITH AZATHIOPRIME VERSUS RITUXIMAB (TAILORED OR FIXED-SCHEDULE) IN ADULTS WITH GENERALIZED ANCA VASCULITIS IN COLOMBIA

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Background and Aims: Azathioprine has been for decades the drug of choice for maintenance therapy in patients with generalized ANCA vasculitis in remission. However, recent studies show that rituximab, a high-cost biological agent, which can be administered in two different schedules, might be more effective, so it is necessary to know the cost-effectiveness.

Our goal was to compare the cost-effectiveness of the 3 maintenance schemes: standard therapy with azathioprine; fixed-dose rituximab and rituximab tailored according to CD19 lymphocyte level and ANCA titres, from the perspective of the Colombian healthcare system.

Method: We designed a 5-year annual cycle Markov model with the following stages: remission, minor relapse, mayor relapse and death. Transition probabilities were obtained from a systematic review of the literature (Scopus and Pubmed). Following national guidelines for economic studies, costs (in 2018, 1 euro = 3489 Colombian pesos) were estimated based on national drug registries, and official tariff manuals for procedures and other resources. Main outcome was quality-adjusted life years (QALY), using lupus nephropathy as a proxy; values were obtained from Tufts CEA Registry and validated by local expert panel through a modified Delphi technique. Cost-effectiveness threshold was three-times per capita GDP (16.872 euros). Discount rate was 5%. Univariate and probabilistic sensitivity analyses were performed.

Results: Overall discounted 5-years costs were € 1149 for azathioprine; € 4025 for tailored rituximab and € 5221 for fixed rituximab. QALY gains were 2.94, 3.63 and 3.64, respectively. Both tailored and fixed rituximab were cost-effective (cost per QALY gained: € 4168 and € 5817 respectively), but tailored dosing was preferable due to its lower cost. Sensitivity analyses did not modify these results significantly.

Conclusion: To our knowledge this is the first economic evaluation that compare azathioprine with tailored and fixed rituximab regimens as a vasculitis maintenance treatment in adults with ANCA generalized. Due to its lower effectiveness azathioprine should not be the first line of treatment. Tailored rituximab should be a better option than fixed schedule due to its lower cost with similar effectiveness.