Abstract

Introduction, rheumatoid arthritis (RA) is a chronic illness that implies high direct and indirect costs for the health system, in particular when biological therapy is prescribed. Objectives, the aim of this study was to design an economic model for decision-making between adalimumab (ADA), etanercept (ETA) and infliximab (INF) in the Colombian context. Methods, we designed a Markov model with a time horizon of two years and a third party payer perspective, measuring the effectiveness (as proportion of patients with ACR50 response or better) discontinuation of therapy, adverse events, quality of life in QALY (quality adjusted life years) and direct cost represented in Colombian pesos (1 US$ = Col$1800 pesos, aprox). Results, discontinuation of therapy was highest for INF, and lowest for ETA. The gain in QALYs was somewhat higher for ETA and ADA, compared with INF. The total annual costs of the therapy with INF was $44.8 million, $41.0 million for ADA, and $39.0 for ETA. The cost per month with ACR50 or higher was $9.37, $8.83 and $13.5 million, respectively for ADA, ETA and INF. Conclusion, given the limitations and given the assumptions of this model, we conclude that in the average Colombian patient with AR, ETA is dominant over ADA and INF, by having a lower total cost and at least the same effectiveness as ADA and higher than INF.

Keywords

Rheumatoid arthritis, biological therapy, economic analysis, QALY, cost-utility.