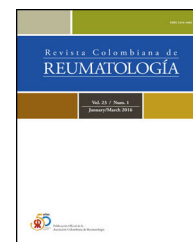




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Editorial

Economic evaluations in rheumatology. New learnings

Evaluaciones económicas en reumatología. Nuevos aprendizajes

Rheumatoid arthritis is considered a high-cost pathology, according to the operational definitions for this type of condition.¹ In Colombia, the High-Cost Account registry has been set up in order to have a homogenized information matrix to study the population characteristics of patients with high-cost diseases, including rheumatoid arthritis.

Despite having this registry, at a national level there have been few partial or complete economic evaluations that address the topic of rheumatoid arthritis. In the publication by Quintana et al., the costs of care were reflected according to the degree of disease activity, but a complete economic evaluation was not performed.² The foregoing does not diminish the importance of the document, and even allowed to determine the impact of this disease on care costs, especially in patients with uncontrolled disease.

In the international context, the majority of studies of this type address the cost-effectiveness or cost-utility of two or more health technologies. Care schemes focused on the disease or on critical phases thereof that may be susceptible to dramatic changes in morbidity and mortality or in the cost structure when intervened in a timely manner, especially if there are favorable health outcomes, are analyzed on rare occasions.

Intuitively, it is possible to mention several characteristics of rheumatoid arthritis that oblige to use more financial resources in the care of the disease to achieve better results. Among them we can mention the time of evolution, the association with other comorbidities, the presence of prognostic factors (e.g., accelerated structural damage, smoking, rheumatoid factor and anti-cyclic citrullinated peptide antibodies in high titers), or social determinants.¹ For this reason, an economic evaluation that starts from the comparison of achieving disease control goals in two different temporal scenarios of rheumatoid arthritis (early vs. established) allows us to observe differences in the opportunity cost in the care of

the condition. Therefore, it is pertinent to consider it a proxy for a large part of the determinants of health that increase care costs and are differential when treating early-onset or established rheumatoid arthritis.¹

With the previous background, it is worth highlighting the publication by Sarmiento-Peña et al.,³ which corresponds to a complete cost-effectiveness evaluation that allows analyzing the behavior of cost structures and effectiveness, focused on achieving goals for the control of rheumatoid arthritis in early onset, compared with the established disease. It complies with all methodological guidelines, in accordance with the Institute for Health Technology Assessment [Instituto de Evaluación Tecnológica en Salud (IETS)].⁴ However, it is important to make some clarifications in order to illustrate to the reader the relevant data of the document.

It is worth highlighting the perspective that was chosen for the third-party payer or the health system, given the availability of information on direct costs. Ideally, indirect costs, which correspond to those incurred due to the loss of work capacity, should also be taken into account. Rheumatoid arthritis presents greater structural damage during the phase of established disease, compared with the early phase; therefore, it is a relevant aspect that makes it necessary to explore the behavior of these costs in future publications.⁴

Likewise, when considering the concept of opportunity-cost, health systems must choose between several options to solve different health priorities, which involves financial decisions, in view of the existing budgetary limitations. For the above reasons, it is advisable to incorporate into the decision rule of economic evaluations the cost-utility analysis, which allows us to compare between several alternatives with the use of quality-adjusted life years (QALY).⁴

When reviewing the article, the representative market rate should be taken into account, especially adjusting it with the predominant currency and with lower fluctuation, in order to facilitate the comparability with similar publications at the regional level.

Propensity Score Matching (PSM) allows two populations obtained by non-probabilistic sampling to be matched by characteristics of the subjects, not related to the outcome variable(s), facilitating the comparison between both.⁵ Within the common support zone, in the work of Peña et al., it was possible to establish the effectiveness of achieving goals in two different temporal phases of the disease. This facilitated the construction of the base case, using a decision tree model that represents the reasoning of the clinician regarding whether or not to achieve goals in the two aforementioned moments of the disease, for which a temporal horizon of six months was taken into account. At first sight, for a chronic disease, six months seems like a short period of time. However, when comparing the early phase with the established phase, the results of therapeutic decisions should lead to achieving goals within six months.⁶ In the study conducted by Stephen et al., an economic evaluation was carried out based on the results of a clinical experiment. Information on the effectiveness of three types of therapies (methotrexate alone vs. methotrexate plus biologic agent vs. biologic agent alone) in severe cases of early-onset rheumatoid arthritis was extracted.⁷ It was constructed a cost matrix, that along with the effectiveness measures was incorporated into a discrete event simulation model, with which the cost-effectiveness ratio was estimated with a temporal horizon of 30 years.⁸ Among the results, it is noteworthy that intervention in the early stages of the disease is cost-effective. Likewise, it is highlighted that the savings in future expenses, as a result of less long-term structural damage, is evident with the observation of the long-term phenomenon or the product of iteration through simulation using probabilistic models.⁹ The study conducted by Sarmiento-Peña et al. transmits an additional strong message to decision makers: more financial resources are required to achieve goals in late phases of the disease.

The study by Sarmiento-Peña et al. invites the medical community of rheumatologists to explore novel ways in order to make economic evaluations using data mining based on institutional or national clinical registries. With this information, techniques of analysis can be used for non-experimental studies such as the PSM, carried out in this study, or others such as, for example, differences in differences, discontinuous regression or instrumental variables.¹⁰ Thus, it is possible to shape research scenarios to build own information and develop better efficiency scenarios in the practice of rheumatology.

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