

ECONOMIC IMPACT OF OPTIMIZING BIOLOGIC THERAPIES FOR ARTHROPATHIES

M. Malpartida Flores¹, M.A. Fernández de la Fuente¹, T.E. Carranco Medina², M.D. Sánchez González², A. Sánchez Martín¹, M.V. Calvo Hernández¹.

¹ University Hospital of Salamanca, Pharmacy Department, Salamanca, Spain. ² University Hospital of Salamanca, Rheumatology Department, Salamanca, Spain.

Objectives

To analyze the economic impact of optimizing biological therapies for rheumatoid arthritis (RA) and other types of spondyloarthritis (SpA) such as ankylosing spondylitis and psoriatic arthritis

Methods

Study features	Data collection	Optimization
<ul style="list-style-type: none"> • Retrospective observational study • All patients treated with biological therapies at the Rheumatology Service • Study period: March - September 2013 	<ul style="list-style-type: none"> • Diagnosis, biological therapy, demographic characteristics • Date and dose/interval after and before adjustment • Cost of the therapy: net unit cost (€) 	<ul style="list-style-type: none"> • Dose reduction (DR) and/or extension of dose interval (E_T) • Criteria • Clinical remission: DAS28 < 2.6 • Low clinical activity: DAS28 < 3.2 BASDAI < 4 • Other clinical recommendations

Results

Population study

N=365 patients
 • RA: 203 patients
 • SpA: 162 patients

Patients with optimizing therapies

Demographic characteristics

N=81 patients
 • Sex: 36 male/45 female
 • Age, years (mean ± SD): 54.7 ± 13.6
 • RA: 40 patients (49.4%)
 • SpA: 41 patients (50.6%)

Clinical criteria

• Clinical remission: 37 patients
 • Low clinical activity: 30 patients
 • Clinical recommendations 14 patients

Optimization

Infliximab	<ul style="list-style-type: none"> ➢ 2 patients (E_T): 6 to 7 weeks ➢ 27 patients (E_T): 8 to 9 weeks ➢ 2 patients (E_T): 8 to 10 weeks ➢ 1 patient (DR, E_T): 5 mg/kg every 9 weeks to 4 mg/kg every 12 weeks
Etanercept	<ul style="list-style-type: none"> ➢ 16 patients (E_T): 7 to 10 days ➢ 5 patients (E_T): 7 to 15 days ➢ 2 patients (E_T): 7 to 21 days ➢ 1 patient (E_T): 7 to 30 days
Adalimumab	<ul style="list-style-type: none"> ➢ 9 patients (E_T): 2 to 3 weeks ➢ 1 patient (E_T): 2 to 4 weeks
Rituximab	<ul style="list-style-type: none"> ➢ 7 patients (E_T): 6 to 7 months ➢ 1 patient (E_T): 6 to 9 months
Tocilizumab	<ul style="list-style-type: none"> ➢ 1 patient (DR): 8 mg/kg to 6 mg/kg ➢ 1 patient (E_T): 4 to 6 weeks
Abatacept	<ul style="list-style-type: none"> ➢ 2 patients (DR): 750 to 500 mg ➢ 1 patient (E_T): 4 to 5 weeks
Golimumab	<ul style="list-style-type: none"> ➢ 1 patient (E_T): 4 to 6 weeks

Cost analysis

Annual cost

• Initial dosing
835,538 €

Cost / patient
10,315 €

• Optimized dosing
594,102 €

Cost / patient
7,335 €

• Saving of the program
241,435 € (29%)

• The greatest cost reduction was achieved with Etanercept and Adalimumab treatment: 39% and 36% of the total saving, respectively.

• At the end of study all patients maintained the optimized dose. Only one patient receiving treatment with Infliximab for psoriatic arthritis returned to the old dosing scheme because skin injury had worsened.

Conclusion

- The optimization of biological therapies could reduce costs while maintaining the efficacy and safety of treatment.
- The optimization of biological therapies begins with patient selection, based on clinical criteria and disease activity.