TAPERING INFLIXIMAB IN ANKYLOSING SPONDYLITIS: CAN WE REDUCE COSTS?

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Introduction

The approved dose of infliximab (IFX) for the treatment of ankylosing spondylitis (AS) is 5mg/kg body weight every 6 weeks. Several studies have shown the 3mg/kg dose to be effective in a subgroup of AS patients but there is few published evidence regarding other dose-reduction regimens, namely adjusting the interval between doses and individualized dose adjustment. We analyzed AS patients disease activity upon increasing IFX administrations intervals on an individual basis.

Methods

The Rheumatic Disease Portuguese Register was used to select all patients diagnosed with AS, under IFX therapy for ≥4 months, followed at Santa Maria Hospital. All patients received IFX 5mg/kg at 0-2-6 weeks and thereafter at variable intervals, between 6 and 11 weeks, on an individual basis, determined by clinical judgement. Response to treatment was assessed using BASDAI (reduction >50% and/or ≥2 points) and ASDAS (Δ>1.1). Clinical remission was defined as an ASDAS<1.3 for ≥4 months and recurrence as and ASDAS≥1.3 during 2 or more consecutive visits.

Results

50 patients were included with a mean time of follow-up of 57±35 months. The baseline characteristics of the studied population are showed in Table 1.

Baseline characteristics	
Males, nr. (%)	36 (72%)
Age, mean (SD)	45 (±12)
Global disease activity assessment (patient), mean (SD)	53,2 (±29,2)
Tender joints, mean (SD)	3,4 (±3,9)
Swollen joints, mean (SD)	0,5 (±1,3)
CRP (mg/L), median (max-min.)	8 (0-170)
BASDAI, mean (SP)	5 (±2,5)
BASFI, mean (SP)	4,9 (±2,3)
ASDAS, mean (SP)	3,3 (±1,4)

Table 1 – Baseline characteristics of studied population.

The time between starting infliximab and the decision to increase dose intervals was of 18.2 (±11.1) months. The mean difference between baseline BASDAI and this time point was of -3,7 (±3,4). 65% of patients had achieved BASDAI50 and 76% ASAS response criteria (table 2).

Infliximab dose intervals increase	Nr. patients(%)
Maintained IFX every 6/6 weeks	11 (22%)
Immediately after the 3rd administration of IFX	12 (24%)
Later than the 3rd administration of IFX	27 (54%)

Table 2 – Infliximab dose intervals increase according to physician decision.

21 patients (42%) achieved remission with the physician determined regime, 21,5±28,1 months after starting IFX. Regarding these patients, 16 (76%) showed persistent remission, 5 (24%) had recurrence of activity (ASDAS≥1.3), on average 12,9 months after remission; at the last visit 19 (90%) had ASDAS<1.3.

Disease activity after remission	Nr. (%)
Maintained recurrence	2 (10%)
Transitory recurrence	3 (14%)
Persistent remission	16 (76%)

Table 3 – Evolution of disease activity in patients that achieved remission.

At the last visit almost 50% of patients shows inactive disease.

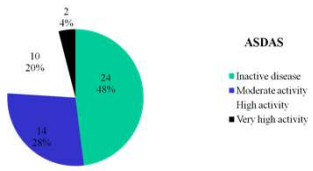

Figure 1- Disease activity at the last patient's visit.

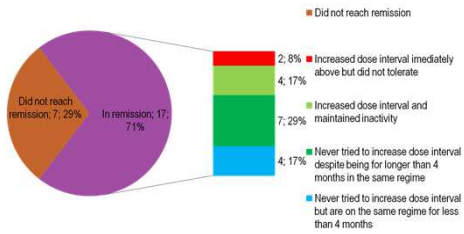

Figure 2- Infliximab regimes and disease activity at the last visit in patients with inactive disease

Interval between doses (weeks)	6	7	8	9	10	11	12
Anual costs(€)	13021,67	11161,43	9766,25	8681,111	7813	7102,727	6510,833
Differences(€)		1860,238	1395,179	1085,139	868,1111	710,2727	591,8939

Figure 3- Estimation of cost reduction according the IFX regime.

Conclusions

78% of patients increased IFX intervals between administrations, 24% of those immediately after the 3rd administration.

The average time to increase IFX intervals based on the physician decision was of 18 months after starting this therapy.

65% of patients showed a BASDAI50 response at the time of physician decision to increase IFX administration intervals.

42% reaches remission with the prescribed regimes and maintains remission through follow-up (32%).

•65% of patients is under increased IFX intervals regimes at the time of the last visit.

Increased IFX intervals regimes are associated with adequate disease activity control in a signficant proportion of patients.

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