



Letter to the Editor

Experience of Monitoring Subcutaneous Biological Treatment (Adalimumab) by Nurses in Chronic Inflammatory Diseases[☆]

Monitorización por enfermería de la administración de tratamientos biológicos subcutáneos (adalimumab) en enfermedades inflamatorias crónicas

Dear Editor:

Diseases such as rheumatoid arthritis (RA) and psoriatic arthritis (Apso) are chronic processes that require an early diagnosis, monitoring and active treatment.¹ The EPISER study showed that rheumatic diseases have an extraordinary frequency in the Spanish population and considerable social impact due to disability.^{2–4}

Biologic drugs block are diverse molecules and include tumor necrosis factor alpha blockers (infliximab/Remicade[®], adamilumab/Humira[®], etanercept/Embrel[®]); others such as (rituximab/Mabthera[®]), a monoclonal antibody cytotoxic to B lymphocytes, with anti-CD20 activity; inhibitors of co-stimulation (abatacept/Orencia[®]); and interleukin-6 inhibitors (tocilizumab/Roactemra[®]).^{5,6} The administration of these therapies requires nursing personnel with experience to monitor their administration, and perform education tasks, care and the control of the appearance of adverse events.^{1,7,8}

Coinciding with the installment in our center of a polyvalent day and the change of device (pen or syringe) of a new prescription of adalimumab,^{9,10} the double objective of our study was to: (a) know the opinion of patients treated with subcutaneous biologics with respect to the education given by the nurses staff, and (b) evaluate their preferences after using the two adalimumab (Humira[®]) devices: syringe vs pen. An informative session was performed to patients treated with adalimumab, an anonymous questionnaire evaluating education by the nursing staff and a home questionnaire that evaluated different variables of the two devices, after administering a dose with the “adalimumab syringe” and another with the “adalimumab pen”. 16 patients treated with a preloaded syringe of Humira[®] were included (7M/9F), diagnosed with RA (9/16) and Apso (7/16), with a mean age of 53.8 years (range: 29–77). The mean time since onset of disease was 7.5 years (range: 1–21 years), with a mean time treated with Humira[®] of 20.43 months. Areas taught included: injection sites, device management and self-injection technique, transport and conservation of medication, elimination of residue, knowledge and specific care. In a second visit lasting 30 min, the nursing staff performed a global evaluation and supervised the self-administration of medication.

The variables evaluated were: pain at 0 and 15 min post-injection, difficulty in managing the device, global evaluation and preference for one device over the other (pen vs preloaded syringe). For the evaluation we used a visual analog scale (VAS: 0–10), but given the reduced number of patients in our sample, results were grouped on a 1–4 scale. VAS: 0 (1), 1–3 (2), 4–7 (3) and 8–10 (4). All of the patients gave their informed consent to participate in the study.

81.25% of patients (13/16) self-administered the medication and in 18.75% (3/16) someone else did (family or nurse). 50% of patients (8/16) received nursing education prior to treatment, positively evaluating it when answering the following questions: (a) global evaluation of attention and education received: 100% considered it “very good” on a scale (does not know: 0, very deficient: 1, deficient: 2, normal: 3, good: 4 and very good: 5); (b) evaluation of the time employed by the nurses visit: 100% considered it “very satisfactory” on a scale (does not know: 0, very scarce: 1, scarce: 2, regular: 3, satisfactory: 4 and very satisfactory: 5), and (c) in the usefulness of the education received: 5/8 (62.5%) considered it “very good” and 3/8 (37.5%) “good” on a scale (does not know: 0, very inadequate: 1, inadequate: 2, normal: 3, good: 4 and very good: 5). Of those, 7/8 (87.5%) would have liked to have received it and 1/8 (12.5%) did not know. Through the home questionnaires data were collected that allowed the evaluation of the two devices in 13/16 patients. One could not evaluate the pen due to infection and 2 gave no final information. The main variables under evaluation were: post-injection pain at 0 and 15 min, difficulty managing the device and preference for one device over the other.

The grouped mean of baseline pain of the syringe with respect to the pen during administration in 13/16 patients was 2.15 and 2.0 ($P=.4$) (scale 1–4) (chi squared test); with respect to pain 15 min after the injection there was a significant difference between both devices, 1.85 and 1.46 ($P=.035$) (scale 1–4). Comparing the difficulty in managing both devices, the syringe proved to be more complex (2.08) than the pen (1.46), with a significance level of $P=.03$. There were no significant differences regarding the global evaluation between both mechanisms ($P=.55$). The results with respect to the preferred device were: syringe 1/13 (8%), pen 7/13 (54%) and regardless 5/13 (38%).

After comparing both devices, patients with RA and Apso treated in our center considered the pen more manageable than the syringe, they have less pain at 15 min post-injection with the pen and a high percentage of them would use the pen. The care of the patient with chronic inflammatory diseases must be approached from a teamwork perspective, including the physician, nurses and physical therapist, etc., always with the end of offering a global evaluation.

References

- Harto-Castaño A. Training program for patients with multiple sclerosis at the start of immunomodulatory therapy. *Enferm Clin.* 2007;17:267–71.
- Loza E, Jover JA, Rodríguez-Rodríguez L, Carmona L, EPISER Study Group. Observed and expected frequency of co-morbid chronic diseases in rheumatic patients. *Ann Rheum Dis.* 2008;67:418–21.

[☆] Please cite this article as: Sánchez-Eslava L, et al. Monitorización por enfermería de la administración de tratamientos biológicos subcutáneos (adalimumab) en enfermedades inflamatorias crónicas. *Reumatol Clin.* 2011. doi:10.1016/j.reuma.2011.04.004.

3. Carmona L, Villaverde V, Hernández-García C, Ballina J, Gabriel R, Laffon A, et al. The prevalence of rheumatoid arthritis in the general population of Spain. *Rheumatology*. 2002;41:88–95.
4. Loza E, Jover JA, Rodríguez L, Carmona L, EPISER Study Group. Multimorbidity: prevalence, effect on quality of life and daily functioning, and variation of this effect when one condition is a rheumatic disease. *Semin Arthritis Rheum*. 2009;38:312–9.
5. Weinblatt ME, Kremer JM, Bankhurst AD, Bulpitt KJ, Fleischmann RM, Fox RI, et al. A trial of etanercept, a recombinant tumor necrosis factor receptor: Fc fusion protein, in patients with rheumatoid arthritis receiving methotrexate. *N Engl J Med*. 1999;340:253–9.
6. Edwards JC, Szczepanski L, Szechinski J, Filipowicz-Sosnowska A, Emery P, Close DR, et al. Efficacy of B-cell-targeted therapy with rituximab in patients with rheumatoid arthritis. *N Engl J Med*. 2004;350:2572–81.
7. Giezen TJ, Mantel-Teeuwisse AK, Straus SM, Schellekens H, Leufkens HG, Egberts AC. Safety-related regulatory actions for biologicals approved in the United States and the European Union. *JAMA*. 2008;300:1887–96.
8. Khanna D, McMahon M, Furst DE. Safety of tumour necrosis factor-alpha antagonists. *Drug Saf*. 2004;27:307–24.
9. Kivitz A, Segurado OG. HUMIRA pen: a novel autoinjection device for subcutaneous injection of the fully human monoclonal antibody adalimumab. *Expert Rev Med Devices*. 2007;4:109–16.
10. Kivitz A, Cohen S, Dowd JE, Edwards W, Thakker S, Wellborne FR, et al. Clinical assessment of pain, tolerability, and preference of an autoinjection pen versus a prefilled syringe for patient self-administration of the fully human, monoclonal antibody adalimumab: the TOUCH trial. *Clin Ther*. 2006;28:1619–29.

Lucinda Sánchez-Eslava,^a Hèctor Corominas,^{b,*} Manel Riera,^c Ramon Fíguls^b

^a *Enfermera Hospital de Dia polivalente, Hospital Dos de Maig de Barcelona, Barcelona, Spain*

^b *Unitat de Reumatologia, Hospital Moisès Broggi, Sant Joan Despí, Barcelona, Spain*

^c *Unitat de Reumatologia, Hospital Dos de Maig, Barcelona, Spain*

* Corresponding author.

E-mail addresses: Hector.corominas@sanitatintegral.org, vancor@yahoo.com (H. Corominas).