

**Results** Twenty six patients were investigated:

- Previous treatment: 10 patients with natalizumab (4 for over 2 years), 8 with interferon beta (IFN $\beta$ ) (6 of them for more than 1 year), 3 with glatiramer acetate (GA), 3 with azathioprine with mycophenolate mofetil and 1 with methotrexate.
- FTY treatment periods: 4 patients had started <1 month ago; 18 between 1–6 months; 3 between 6–12 months and one >1 year.
- Vital parameters: mean arterial pressure (MAP): 121.29 mmHg/70.41 mmHg and 113.06 mmHg/68.31 mmHg after 6 h of administration. The mean heart rate (MHR): 71.06 beats/min and 62.53 beats/min after 6 h.
- Disease progression: 1 patient suffered only one flare-up. Nine patients had a mean decrease of 0.72 in the EDSS scale and 4 maintained the values. There was no increase in lesion extension in Nuclear Magnetic Resonance.
- Average monthly costs: FTY €1,872.5; IFN $\beta$ /GA (1st line) €843.91; natalizumab €1,923.90 (costs related to the route of administration were not counted).

**Conclusions** There was no worsening of symptoms after introduction of FTY and there was only one recrudescence episode, requiring long-term assessment.

Despite costing more than first-line medicines, FTY was the best option because it is an oral formulation, so is more convenient for patients.

#### Reference

1. Portuguese Society of Multiple Sclerosis

No conflict of interest.

#### DGI-011 ANTI-TUMOR NECROSIS FACTOR REAL-WORLD DOSES: FOUR-YEAR RETROSPECTIVE STUDY IN RHEUMATOID ARTHRITIS PATIENTS IN TWO HOSPITALS IN SPAIN

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**Background** Achieving minimum clinically effective doses offers major advantages in safety and efficiency.

**Purpose** To evaluate mean dosage in rheumatoid arthritis (RA) patients treated with adalimumab (ADA), etanercept (ETN) and infliximab (IFX). To correlate these dose strategies with the patient's disease activity. To estimate annual costs associated.

**Materials and Methods** Observational, retrospective study. RA patients who received ADA, ETN or IFX for at least 6 months during 2006–2010 were included. Patients could receive different sequential treatments. Mean drug consumption was analysed based on hospital pharmacy service claims and presented as a percentage of the standard RA dose. Escalated and reduced doses were defined as those higher and lower than standard doses. Demographic data, concomitant treatment, disease activity (DAS28-ESR) and anti-TNF dosage were analysed. The therapeutic objective was defined as DAS28 < 3.2. Associated annual costs were estimated based on public ex-factory prices including tax (2011 Euros).

**Results** 198 patients (mean age 60.5 years [ $\pm$ 13.06], 80% female, baseline DAS28 = 4.38 [ $\pm$ 1.52]). 215 cases: ADA (66 first line, 7 second line), ETN (71 first line, 9 second line, 1 third line), IFX (61 first line).

**Conclusions** There were no statistical differences regarding baseline disease activity ( $p > 0.05$ ). Patients in the ADA or IFX groups increased doses above standard doses more frequently than ETN patients ( $p < 0.05$ ).

There were no differences between groups in percentage of patients with DAS28 < 3.2 ( $P = 0.927$ ).

Anti-TNF real-world data shows significant differences compared to recommended doses, which directly affect treatment costs and

efficiency. Measuring efficiency in clinical practise is key for optimization and rational use of biological medicines.

#### Abstract DGI-011 Table 1

	ADA N = 73	ETN N = 81	IFX* N = 61
Concomitant DMARDs (%)	80.83%	74.07%	90.16%
Study real doses <sup>†</sup>	93.02% <sup>†</sup> (37.21 mg/biw)	81.00% <sup>†</sup> (40.5 mg/week)	135.73% <sup>†</sup> (4.07 mg/kg/8 weeks)
Mean reduced doses	32.88%	46.91%	8.2%
Mean increased doses	9.58%	3.7%	75.41%
DAS28 < 3.2 (%)	67.12%	65.43%	62.30%
Patient-year cost (standard doses)	12,859.79€	11,845.93€	7,566.27€
Patient-year cost (clinical practise) <sup>‡</sup>	11,962.58€ <sup>‡</sup>	9,594.73€	10,094.53€
Patient-year cost differences <sup>†</sup>	-897.22€ <sup>†</sup>	-2,251.20€ <sup>†</sup>	+ 2,528.26€ <sup>†</sup>

\*IFX: 110.93€/infusion, 0.89% waste optimising vials. Mean weight: 68.04 kg.

<sup>†</sup>p < 0.05 between groups

<sup>‡</sup>p < 0.05 ADA vs. ETN, ADA vs. IFX

No conflict of interest.

#### DGI-012 ANTIBIOTICS MONITORING: THE EXPERIENCE OF LIGURIA REGION, ITALY

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**Background** The Health Department of Regione Liguria has introduced the obligation, for every hospital department to motivate the request to obtain certain kinds of antibiotics, because their use is restricted to serious infections and in consideration of their high cost.

**Purpose** The aim is to restrict the phenomenon of resistance to antibiotics and reduce the rising consumption of these drugs, guaranteeing a correct prescription.

**Materials and Methods** The request for the drugs in question must be made using the appropriate form containing the clinical data of the patients, including personal details, diagnosis and the characteristics of the infection.

The pharmacist verifies the administration dosage and the conformity of the diagnosis with the approved health authority indications and with prophylaxis guidelines. The pharmacist will then decide whether to dispense the drug.

Some hospitals make use of written applications, others have created specific software for this purpose, others have included the application in the software for the management of the hospital admissions and patients records. Furthermore, where necessary, it has been possible also to include specialist advice, in the software.

**Results** In the 2011 the Local Health Board of Genoa (ASL3) received and monitored 2274 specific forms, that is 100% of the requests. The intervention of the pharmacist led to a reduction of 90% in the use of Tigecycline and prevented, in 31 cases, an overdose of Vancomycin hydrochloride on Clostridium Difficile Infection. Administration of oral vancomycin in Clostridium difficile infection was 500 mg qid orally for at least 10 days instead of 125 mg qid orally stated in the international guidelines.

The control of reasoned request by the pharmacist allowed to use the appropriate dosage.

In the Galliera Hospital, 2100 specific forms were filled out (70% of the total requests). Antibiotics non requiring a specific request like ciprofloxacin, ceftriaxone, ceftazidime were used more than in 2009. (2009: 20872units; 2011:25508 units)