Background Multiple Sclerosis (MS) is a chronic inflammatory disease of the central nervous system that disables young adults. Epidemiologic studies have shown that women are more likely to develop MS than men (ratio 2:1); however, the pathogenesis and treatment of MS in regards to gender has not been extensively studied.

Purpose To evaluate gender-related differences of relapsing-remitting MS patients in response to treatment with natalizumab.

Materials and Methods AIFA-NEURO records relative to patients treated with natalizumab in the Neurology Division of L’Aquila were examined from May 2007 to September 2012. A total of 39 patients were recruited, of which 82% were females. The average age of patients starting the treatment was 33 for females and 36 for males. An Expanded Disability Status Scale (EDSS) score was assigned for each patient before natalizumab treatment was started. The number of relapses in the 12 months before starting treatment with natalizumab were calculated and recorded.

Results EDSS scores were similar (average = 2.8) in females and males. In contrast, females were more likely to have relapses compared to men (1.8 vs. 1.4). Only 3 patients were treated with natalizumab as the first-line drug; all other patients were first treated with a combination of 2 or 3 drugs. Females were more likely than males to have previously been treated with IFN-β 1a compared to (IFN)-β 1b (62.5% vs. 37.5%), while men had previously been treated with both equally (57%). Additionally, females were more likely to have been treated previously with glatiramer acetate (44% vs. 14%). All patients received an average of 10.5 administrations of natalizumab per year. All patients are currently undergoing treatment except for 5 females who developed autoimmune reactions.

Conclusions The study describes gender-related differences in response to pharmacological treatments for MS. The results suggest that research should be conducted into the gender response to MS treatments.

No conflict of interest.

Background Rheumatic diseases are chronic diseases with a high cost. New drugs are the anti-TNF inhibitors adalimumab (A) and etanercept (E). The Infectious Diseases Unit of Umberto I Hospital, Syracuse, Italy, was identified as a Regional Centre for the prescription of biologicals. Furthermore, D.A. 0264/16.02.2011 authorised a regional Treatment Plan (TP) by which these drugs are to be dispensed, health care costs and appropriateness of prescription monitored.

Purpose To evaluate the consequences of the TP and the effects of A and E on PCR values and number of joints involved (NJI).

Materials and Methods The TP is annual and consists of two sections containing: 1. Demographic features, diagnosis, prior therapy with any failures, clinical and laboratory data (NJI, PCR), date of first prescription and dose of biological agent. 2. Follow-up at 6 months, with the assessment of therapeutic efficacy (excellent, good, adequate, inadequate), side effects and updated clinical data.

Results Overall, 56 PTs were examined: 32.7% of patients (mean±SD age: 50.7 ± 12.1) taking A and 67.3% (mean±SD age: 54.1 ± 13.7) taking E. In subjects treated with A the PCR values were: 0.5 ± 1.0 g/dl (baseline) and 0.1 ± 0.2 g/dl (6 months); NJI were: 11.9 ± 7.2 (baseline) and 10.1 ± 9.2 (6 months). In subjects treated with E, the PCR values were: 2.5 ± 6.2 g/dl (baseline) and 1.2 ± 3.9 g/dl (6 months); NJI were: 15.4 ± 10.8 (baseline) and 8.2 ± 8.2 (6 months).

Conclusions The use of A and E has been shown to improve the clinical condition of the patients. Furthermore, the use of the TP has allowed all patients with rheumatic diseases in the province of Syracuse to access a dedicated health facility, reducing their physical/economic inconvenience. A significant economic benefit was recorded for the ASF 8, not having to refund the costs of flow-compensation activation (File F).

No conflict of interest.