MULTIPLE SCLEROSIS THERAPY AT MACERATA'S GENERAL HOSPITAL: ECONOMIC IMPACT

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Background

Relapsing Remitting Multiple Sclerosis (RRMS) has an increasing incidence in young adults and a high socialeconomic mpact. Treatment delays progression, doesn't cure the disease, but new oral drugs' innovative pharmacodynamics profile improves therapeutic approach. Therapy review could prompt a better understanding of RRMS care's effectiveness.

Purpose

To investigate RRMS therapy economic impact on the Pharmacy of Macerata's General Hospital from January 2011 to December 2014. To analyze patients' demographic and clinical characteristics (i.e. failures and adherence).

Material and methods

This review was conducted in collaboration with RecordData srl (prescription data regional provider) and neurologists and nurses for failure reasons analysis. Teamwork produced a database of patients' therapeutic history. We analyzed prescriptions of: first generation disease modifying therapies (DMT) (interferon 1a and 1b, glatiramer)∟ second generation DMT (fingolimod, natalizumab)∟ relapsing therapy (methylprednisolone). Dosage and administration frequency were compared with data from the Summary of Product Characteristics (SPC).
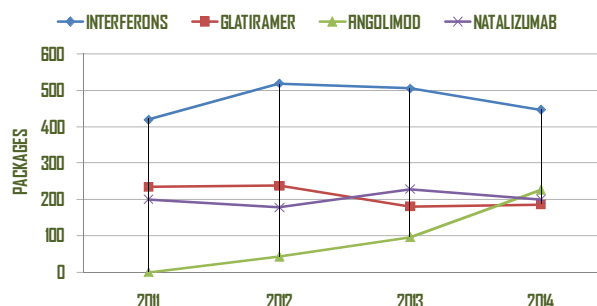
Results

During the studied period, on a population of 118 patients treated (73 females/ 45 males) with an average age of 39,8 years (from 16 to 63) and a mode of 32 years both genders, 49.450 doses had been prescribed (4.086 packages: 21,9% in 2011/ 24,72% in 2012/ 25,48% in 2013/ 27,9% in 2014) (picture 1 and 2) and 5.109.761,97 € spent (21,62% in 2011/ 23,21% in 2012/ 26,88% in 2013/ 28,29% in 2014) (picture 3). Natalizumab, although only 1,62% of the provided doses (806/49.450), was the most expensive drug: 2.160.963,38 € (42,29%). Interferons represented 32,86% of costs with 38.154 doses (77,16%/ 1.543 from 2011 to 2014) for 308 patients. Since 2012 fingolimod was prescribed to 37 patients (10.304 doses/ 20,84%) consisting in 12,48% of expenditure. Relapsing therapy concerned 83,1% of patients with 186 doses (0,37%) of methylprednisolone. Number of administrations was consistent with SPC data. Failures included 51 patients (43,22%) (picture A abd 5): 17,65% of interruptions (2 cases of adverse drug reactions)/ 42 (82,35%) switches (40,48% interferon-glatiramer/ 28,57% interferon-fingolimod/ 14,28% interferon-natalizumab).
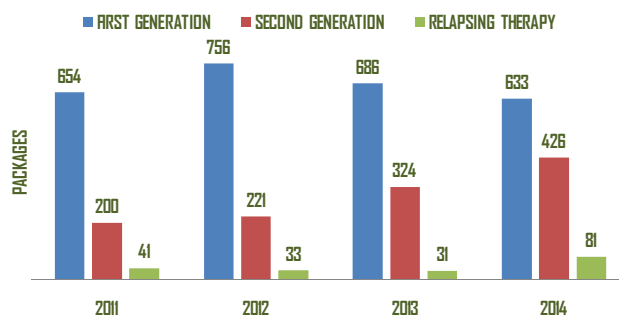
Conclusion

The review showed DMT high costs and complexity of RRMS management (interruptions/switches/relapsing). Teamwork is a priceless resource to patients' healthcare. Monitoring is being extended through 2015, including teriflunomide, dimethylfumarate and alemtuzumab prescriptions.
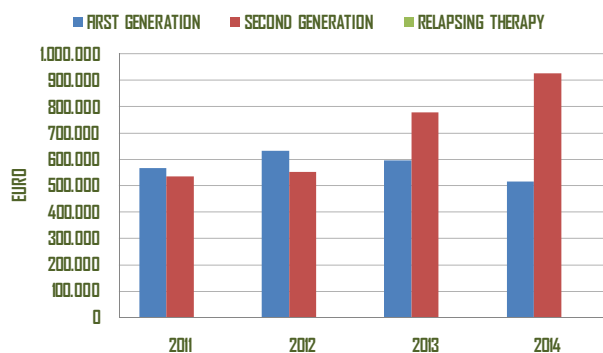
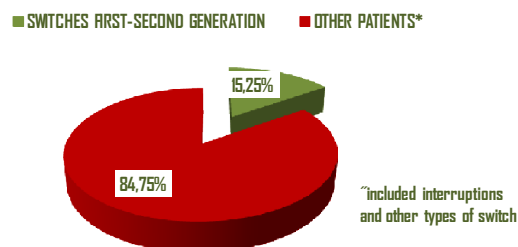Pic. 1-DRUG DISTRIBUTION PER YEAR

Pic. 2-PACKAGES DISTRIBUTION PER YEAR AND TREATMENT

Pic. 3-EXPENDITURE DISTRIBUTION PER YEAR AND TREATMENT

Pic. 4-PATIENTS SWITCHED FROM FIRST TO SECOND GENERATION OF DMT

*included interruptions and other types of switch

Pic. 5-FAILURES vs. NOT FAILURES PATIENTS