Material and methods This was an observational cohort study based on hospital pharmacy claims data. All patients with multiple sclerosis, with at least one drug claim for any available DMD (interferon, fingolimod, dimethyl fumarate, glatiramer acetate, natalizumab or teriflunomide) between 2012 and 2017, in a general hospital, were eligible. Main outcomes included comparison of treatment patterns, treatment switches over time and oral drug uptake, between 2012 and 2017.

Results A total of 269 patients were included, with a mean age at first drug claim of 42.2 (SD 10.7) years. The sample included 13.0% naïve patients and the remaining had received treatment previously. In 2012, the majority of patients were receiving treatment exclusively with interferon (68.8%), glatiramer acetate (24.1%), natalizumab (4.0%) and fingolimod (1.0%); the remaining switched between treatments over 1 year. Despite more treatment options in 2017, interferon was still the most used (52.7%), followed by glatiramer acetate (20.2%), teriflunomide (8.5%), natalizumab (6.9%), fingolimod (5.9%) and dimethyl fumarate (2.7%). Over the study period, 77.3% of patients never switched therapy, of these 53.2% remained on interferon, glatiramer acetate (18.6%) and natalizumab (4.5%). In 2012, almost all patients were receiving injectable DMD. During follow-up, oral DMD patient uptake rose from 0.6% in the third quarter of 2012 to 19.5% at the end of 2017.

Conclusion and relevance Unlike previous published studies, this cohort of patients did not show widespread adoption of oral DMD. This study also showed a low proportion of switches to new drugs, with the majority of patients still receiving treatment with interferon over a 6 year period.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

6ER-010

Therapeutic Drug Monitoring of Tumour Necrosis Factor α Inhibitors in Inflammatory Bowel Disease: Evidence from a Real World Setting

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10.1136/ehjpharm-2020-eahpconf.445

Background and importance Biologics have become the mainstay for treatment of inflammatory bowel disease (IBD) but these drugs often require dose escalation to maintain effectiveness. Currently, therapeutic drug monitoring (TDM) can be used to measure drug concentrations in blood and antibodies against tumour necrosis factor α (TNF α) inhibitors and therefore individualise recommended doses in IBD. TDM is associated with greater effectiveness compared with empirical dose adjustment.

Aim and objectives The study aimed to characterise TDM of the TNF α inhibitor adalimumab in patients diagnosed with IBD.

Material and methods This was a retrospective observational study based on medical and pharmaceutical records. Inclusion criteria comprised patients with a diagnosis of IBD, on maintenance therapy with adalimumab in a general hospital, between 2014 and 2019. The main outcomes included dose escalations, therapy discontinuation and TDM.

Results A total of 40 patients met the inclusion criteria, with a mean age of 39.6 (SD 15.7) years, 50.0% were women, average weight was 66.2 (SD 15.7) kg, and 90.0% had Crohn's disease and the remaining had ulcerative colitis. Adalimumab was more frequently administered as a fourthline therapy for IBD (32.5%), considering also conventional therapy. Prior to adalimumab, 80% of patients were treated with immunosuppressants, 57.5% with salicylates, 52.5% with infliximab, 45.0% with corticosteroids and 12.5% had been previously treated with adalimumab. The majority of patients (60%) were being treated with adalimumab as monotherapy, 30% concomitantly with immunosuppressants and the remaining with salicylates or corticosteroids. Median time on therapy with adalimumab was 25.1 months. For all patients, although in a small proportion of patients TDM was performed (15.0%), 83.3% maintained therapy with adalimumab, while only 67.6% of patients without TDM remained on therapy with adalimumab. Dose escalation occurred in 32.5% of patients, 15.4% following TDM and 84.6% occurred empirically. All patients with TDM continued therapy whereas 45.5% of patients with empirical dose escalation either discontinued therapy or showed a low response.

Conclusion and relevance The study showed that TDM of adalimumab led to a lower proportion of discontinuations or low response in IBD treatment. Although TDM is still performed in a minority of patients, its use should be encouraged in a real world context.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

6ER-011

REAL WORLD ADHERENCE TO MULTIPLE SCLEROSIS THERAPY

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10.1136/ehjpharm-2020-eahpconf.446

Background and importance Good adherence to disease modifying therapy for multiple sclerosis is associated with a reduced risk of relapse, maximising the beneficial effects of treatment. Hospital pharmacists are key healthcare professional in patient therapy management and adherence.

Aim and objectives The study aimed to assess adherence to multiple sclerosis therapy in a real world setting.

Material and methods This was a retrospective cohort study based on drug hospital pharmacy claims for multiple sclerosis. Patients with at least one drug claim for multiple sclerosis (interferon, fingolimod, dimethyl fumarate, glatiramer acetate, natalizumab or teriflunomide) were identified from a general hospital, between 2012 and 2017. Adherence was evaluated using medication possession ratio (MPR), defined as the total number of days with drug supply divided by the observation period. Adherence was calculated at 6, 12 and 24 months. Only patients who had a drug claim between 30 days before the defined time point or anytime until the end of follow-up were included. Patients with an MPR $\geq$ 80% were considered adherent to therapy.

Results There were 269 patients with at least 6 months of follow-up: mean age at first drug claim was 42.2 (SD 10.7)