As much a 40% of patients with ankylosing spondylitis will fail (BASDAI >4) different non-steroidal anti-inflammatory agents and will eventually be treated with an anti-TNF agents. Response is usually satisfactory but retention of drug may vary from one agent to the other and from one patient to the other. Reasons for stopping and/or switching are either inefficacy, intolerance or spontaneous improvement of the disease activity in a given individual.

The goal of this analysis is to explore the first 6, 12 and 18 month period after first exposure to an initial agent and assess the cycling incidence from different anti-TNF agents namely adalimumab (ADA), etanercept (ETA), infliximab (INF), golimumab (GOL) or certolizumab (CERTO).

Patients with ankylosing spondylitis as diagnosed by their treating rheumatologists and exposed to either adalimumab, etanercept, infliximab, golimumab or certolizumab in first intention after failing two different non-steroidal anti-inflammatory agents for a minimum of 3 months each were extracted from the Quebec inflammatory database, Rhumadata®. Demographics and baseline characteristics include age, gender, disease duration, HLA-B27, BASDAI, BASFI, patient global (VAS) and ASDAS (CRP). Cycling from one agent to another was then explored at 6, 12 and 18 month time point. Proportion of patients switching vs not switching at each time point are assessed. Reasons for switching at each time point (infectivity, AEs infections, surgery or death) are expressed in percentages.

**RESULTS**

The data from 296 patients with ankylosing spondylitis and prescribed either adalimumab (114=39%), etanercept (61=21%), golimumab (31=10%) or infliximab (90=30%) as first biologic agent were extracted. These patients were treated for a period ranging from 0.4 to 173.2 months with a mean treatment duration of 44.0 (SD=36.3) months. At 6, 12 and 18 months, 25.7% and 35.8% of patients had either stopped or switched their medication. The reported reasons for stopping or switching medication were inefficacy (76.4%), adverse events (5.7%), surgery (14.2%) and lost to follow-up (3.6%).

Switches at the 6 month time point vary from 4.4% (ADA) to 9.8% (ETA). The percentage of switches increase with time for all agents except golimumab (9.7% at 12 and 18 months). A significantly higher proportion of patient stops golimumab and do not switches to another agent (51.6%). Main reason for stopping or cycling to another agent is inefficacy.

**CONCLUSIONS**

Supported by unrestricted grant from Abbvie Canada, Amgen Canada, BMS Canada, Celgene Canada, Janssen-Cilag Canada, Pfizer Canada, Roche Canada

Disclosure of interest: None declared

Denis Choquette MD
Institut de Rhumatologie de Montreal
1501, Ontario Street East
Montreal, Canada
denis.choquette.imr@videotron.ca