

NATALIZUMAB DISCONTINUATION IN PATIENTS DIAGNOSED WITH RELAPSING REMITTING MULTIPLE SCLEROSIS

M.E. Cárdena García¹, A.M. López González¹, M.J. Neri Crespo², J. Varela González-Aller¹, M.T. Sánchez Sánchez¹, M.N. Téllez Lara².

¹Hospital Pharmacy, Hospital Clínico Universitario. Valladolid. ²Neurology Department, Hospital Clínico Universitario. Valladolid.

Background

Natalizumab is effective in relapsing-remitting multiple sclerosis (RRMS) treatment, although it is associated with serious adverse events that may require therapy discontinuation.

Objective

Assessing the reasons for discontinuing natalizumab treatment in patients diagnosed with RRMS and estimating the length of these treatments.

Material and methods

- ✓ Observational, retrospective study, from December-2007 to June-2016.
- ✓ Patients who received at least one dose of natalizumab in our hospital were included.
- ✓ Collected data: sex, age, Expanded Disability Status Scale (EDSS), reasons for treatment discontinuation, treatment duration.
- ✓ When natalizumab was discontinued because of the risk of developing progressive multifocal leukoencephalopathy (PML), John Cunningham Virus antibody index value was recorded at baseline, after 2 years therapy and when natalizumab was discontinued. This index classified results by positive or negative until 2012, when the reference laboratory set the numeric value (≤ 0.9 , $>0.9 \leq 0.5$, >1.5).

Results

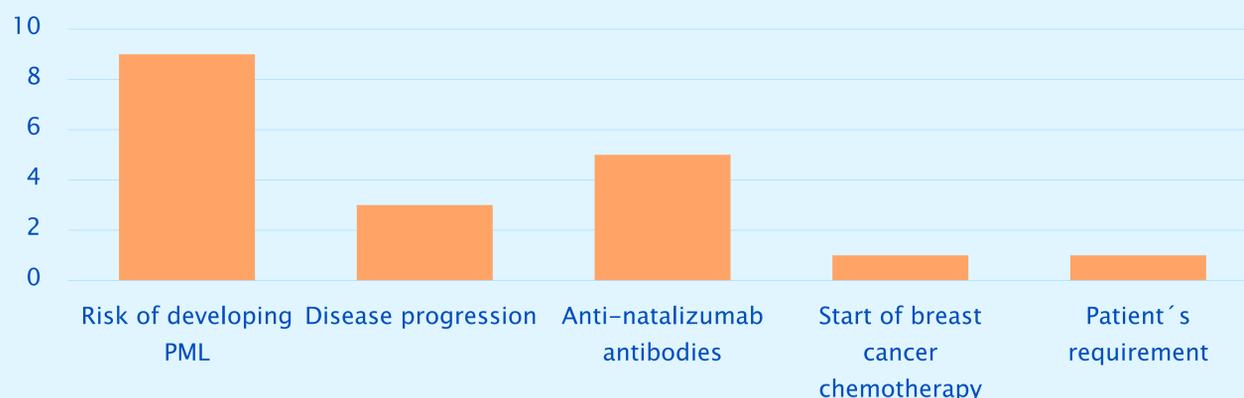


- ✓ 54 patients with EDSS ≤ 5 received at least one natalizumab dose. 7/54 patients without follow-up in our hospital were excluded.
- ✓ Upon completion of the study, 19/47 patients (averaging 31.3 ± 8.6 years, 14/19 women), discontinued natalizumab.
- ✓ Median EDSS at the start of treatment was 3.2 [1.9-4.0]. Median EDSS when treatment was discontinued was 3.3 [1.3-5.0].

Reasons for natalizumab discontinuation were:

- Risk of developing PML (9/19). Index value at baseline: 4/9 patients positive, 2/9 negative, 3/9 not available. Index value two years after starting natalizumab: 5/9 patients positive, 1/9 negative, 3/9 not available. Index value when natalizumab was discontinued: 9/9 patients showed positive status (1/9: ≤ 0.9 ; 1/9: $>0.9 \leq 1.5$; 6/9: >1.5 ; 1/9 without numerical value recorded). There was no PML.
- Disease progression to secondary progressive multiple sclerosis (3/19).
- Anti-natalizumab antibodies (5/19). 4/5 patients reported adverse events: 3/4 infusion reactions, 1/4 paradoxical reaction to natalizumab.
- Start of breast cancer chemotherapy (1/19).
- Patient's requirement (1/19).

Reasons for natalizumab discontinuation



Average natalizumab treatment duration was 2.3 ± 1.6 years, 10/19 patients received natalizumab for over 2 years.

Conclusion

- ✓ Despite the fact that there was no PML in our hospital, main reason for discontinuing natalizumab was the increased risk of developing PML, which increased with treatment duration.
- ✓ Adverse events requiring natalizumab discontinuation only appeared in patients with anti-natalizumab antibodies.
- ✓ Average duration of treatment was slightly over two years.