701 In patients with ankylosing spondylitis treated with adalimumab, the combination therapy with DMARD, increased the serum level of adalimumab and decrease immunogenicity

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BACKGROUND / AIM

In patients with rheumatoid arthritis, methotrexate (MTX), improves the clinical efficacy of anti-TNF (TNFi), among other reasons, for reducing the immunogenicity. However, there are doubts of their benefit in patients with ankylosing spondylitis (AS)

The purpuse of this study is to evaluate the influence of combined treatment with DMARD in clinical efficacy for patients with AS treated with adalimumab (ADL).

METHODS

- Prospective observational Study
- Patient Inclusion
  - Patient diagnosis: ankylosing spondylitis with axial involvement.
  - Nº patients, n: 62.
  - Treatment: all patients received Adalimumab eow, and received DMARD according clinical practice, at the discretion of the rheumatologist.
- Epidemiological data: age, gender, body mass index (BMI).
- Related with AS: time of evolution of disease, presence of psoriasis or inflammatory bowel disease, HLA-B27.
- Related with DMARD: current concomitant DMARD and dose.
- Related with ADL: order of introduction as TNFi treatment and time, and presence of serum anti-ADL antibodies.
- Clinical activity index: Spanish version of BASDAI and ASDAS-ESR.
- Serum concentrations of free ADL (trough level) and anti-ADL antibodies (Ab), were measured using Promonitor-ADL and Promonitor Anti-ADL Ab ELISA kits (Progenika Grifols SA, Spain), as standardised conditions, specified by the manufacturer.
- Cut-off level serum level of ADL was >0.004 U/mL and anti-ADL-Ab was >3.5 U/mL.
- Serum samples were collected before subcutaneous injection of ADL, and stored frozen - 80ºC, until analysis

RESULTS

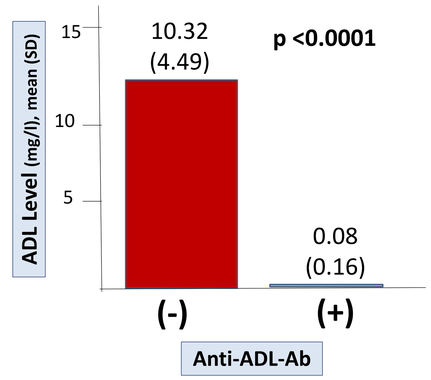
- AS patients, n: 62
- Female, n (%): 31 (50%)
- Age, mean (SD): 46 (10)
- BMI, mean (SD): 27.47 (4.49)
- Time evolution AS, mean (SD), year: 9.5 (9.25)
- AS associated, n (%): 15 (24%)
  - Inflammatory bowel disease: 12 (19%)
  - Psoriasis: 3 (5%)
- HLA-B27 positive, n (%): 46 (77%)

- Current DMARD combined with ADL, n (%): 14 (23%)
  - Methotrexate: 10 (71%)
  - Sulfasalazine: 3 (21%)
  - Azathioprine: 1 (7%)
- ADL first TNFi, n (%): 38 (66%)
- Time on ADL, mean (SD), years: 1,33 (1,44)
- Trough level ADL, mean (SD): 8.62 (8.59)
- **Anti-ADL Ab, n (%): 19 (31%)**
- **Anti-ADL Ab with current DMARD, n (%): 0 (0%)**

Table 1. Characteristics of patients treated with ADL combined with DMARD and those without

	DMARD Yes (n: 14/23%)	DMARD No (n: 48/77%)	p
ADL monitoring, n (%)	34 (31)	79 (69)	
Age (years), mean (SD) Median	48,07 (10.80) 48.5	46.13 (10.75) 45.0	0.56
Male, n (%)	8 (57)	23 (49%)	0.69
BMI (kg/m²): mean (SD) Median	28.12 (3.89) 28.16	27.18 (4.73) 27.51	0.46
Time of disease evolution (years): mean (SD) Median	7.45 (7.09) 6,25	10.46 (9.87) 5.33	0.22
HLA B27 positive, n (%)	10 (71)	36 (77)	0.69
ADL order of treatment, n (%): • First TNFi • Second TNFi • Third TNFi	8 (57) 4 (29) 2 (14)	33 (70) 14 (26) 3 (4)	0.48 0.90 0.68
Time (years) on ADL: mean (SD) Median	1.67 (1.57) 1.0	1.36 (1.27) 0.91	0.51
ADL serum level, mg/L: mean (SD) Median	10.82 (5.16) 11.25	7.59 (5.5) 8.34	**0.064**
anti-ADL Ab, AU/L, n (%):	0 (0)	19 (40)	**0.0001**
BASDAI: mean (SD) Median	4.09 (2.14) 4.1	3.98 (2.20) 4.05	0.86
BASFI: mean (SD) Median	3.67 (2.0) 4.05	3.87 (2.40) 3.90	0.75
ASDAS: mean (SD) Median	2.09 (0.62) 2	2.23 (1.40) 2.1	0.60

Figure 1. ADL level (A) and BASDAI, ASDAS (B) results in patients with or without anti-ADL-Ab



CONCLUSIONS

1) The **prevalence of anti-ADL Ab in AS is 31%.**
2) In our cohort, **100%** of patients with AS who have **immunogenicity**, were been treated with ADL in **monotherapy**.
3) Patients with **anti-ADL Ab has ADL levels almost undetectable** and **loss of efficacy**.

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