

## VEDOLIZUMAB: OUTCOMES AND THERAPEUTIC DRUG MONITORING IN INFLAMMATORY BOWEL DISEASE

Ballesta-López O<sup>1</sup>, Centelles-Oria M<sup>1</sup>, Palanques-Pastor T<sup>1</sup>, Marqués-Miñana MR<sup>1</sup>, Nos-Mateu P<sup>2</sup>, Poveda-Andrés JL<sup>1</sup>

1. Pharmacy Department, Hospital Universitari i Politècnic La Fe (Valencia)

2. Inflammatory Bowel Disease Unit, Gastroenterology Department, Hospital Universitari i Politècnic La Fe (Valencia)

Corresponding author: octavio.ballesta@gmail.com

### BACKGROUND AND IMPORTANCE

Vedolizumab (VDZ) is an alternative in patients with IBD that have inadequate response or loss of response to previous treatment with tumour necrosis factor-alpha antagonists (TNF $\alpha$ ). Therapeutic drug monitoring (TDM) has allowed to optimise anti-TNF $\alpha$  therapy but it is less known its implication with VDZ.

### AIM AND OBJECTIVES

To evaluate prescribing **patterns, effectiveness** and **VDZ trough levels** (VTL) in clinical practice.

### MATERIAL AND METHODS

- **Type of study:** Retrospective observational study from october 2015 to april 2019
- **Inclusion criteria:** age $\geq$ 18 years, ulcerative colitis(UC) or Crohn's disease (CD) treated with VDZ after antiTNF $\alpha$

**Treatment effectiveness:** Mayo Score (MS) and Harvey-Bradshaw Index (HBI) scores in UC and CD, respectively

**Clinical remission: MS $\leq$ 2 or HBS $\leq$ 4**

- **Collected variables:** gender, age, weight, diagnosis, concomitant immunosuppressive treatment, dose and pattern of VDZ, duration of treatment, trough VDZ concentrations and anti-VDZ antibodies(AVA), concentration of C-reactive protein (CRP) and faecal calprotectin (FC).
- **Data collection:** patient's clinical records
- **Statistical analysis:** percentages and 95% confidence intervals

### RESULTS

  
25 patients  
(52% male)

- Average age: **42 years** (Range: 22-75)
- Average weight: **75 kg** (CI95% 67-82)

**UC 52% (n=13) CD 44% (n=11)**

- **Treatment suspension:** 10 patients (mainly by secondary therapy failure)
- **Intensified schedule:** 7 patients (28%) at 300mg/4weeks
- **Need of extra dose on W10:** 36% patients(n=9).
- **Clinical remission:** 50% in UC and 67% in CD
- $\geq$ 1 immunosuppressant+VDZ: 60% of the patients (in the beginning)
- **Median duration** of the treatment: **79 weeks** (CI95%:59-99)

#### VTL

**Induction phase:** 45.3  $\mu$ g/mL (CI95%: 31.0-60.0) (6 patients)

**Maintenance phase:** 25.7  $\mu$ g/mL (range: 6.40-105)

In patients with **CRP $\leq$ 5 $\mu$ g/mL**, VTL was higher (mean 34.3  $\mu$ g/mL) than in patients with **CRP $>$ 5 $\mu$ g/mL** (mean 21.1  $\mu$ g/mL).

CRP and FC concentration were **reduced** by an average of **1.9  $\mu$ g/mL** and **1454 mcg/g**, respectively, during the treatment.

**AVA WERE NOT DETECTED IN ANY PATIENT**

### CONCLUSIONS AND RELEVANCE

Around **1/3 of patients** requires **intensification** of treatment, despite **not identifying the presence of AVA**. Observed CR rates **are quite modest**, therefore VDZ TDM can be a useful tool for the physician in the decision-making process.

