



# Possible therapies in patients with Ulcerative Colitis refractory to anti-TNF $\alpha$ : Leukocytapheresis and new biologics drug



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## Background

Recently the  $\alpha 4\beta 7$  integrin blocker - vedolizumab and interleukin IL-12 and IL-23 blocker - ustekinumab have been introduced for clinical inflammatory bowel diseases (IBD) therapy as a second choice to anti TNF- $\alpha$  or with contraindications to the use. Moreover, Leukocytapheresis is a potential option for the treatment for these IBD patients. The aim of this study is to assess leukocytapheresis and if it can still have a use in selected ulcerative colitis (UC) patient also comparing it with new biologics therapies.

## Methods

From February 2019 to November 2021 15 patients with UC were evaluated: 8 patients treated with leukocytapheresis (group 1) and 7 with new biological drug: Vedolizumab (group 2). All patients had contraindications to anti-TNF-alpha use. We evaluated patients by clinical disease activity indexes and blood parameters levels at the beginning of therapy, then after 3 and 12 months.

## Results

In the first group (leukocytapheresis) after 12 months of follow up (FU) 5 patients achieved clinical remission with 3 patients who received maintenance therapy (12 session for patient), while 3 patients during the FU have started biological therapy (2 adalimumab and 1 vedolizumab).

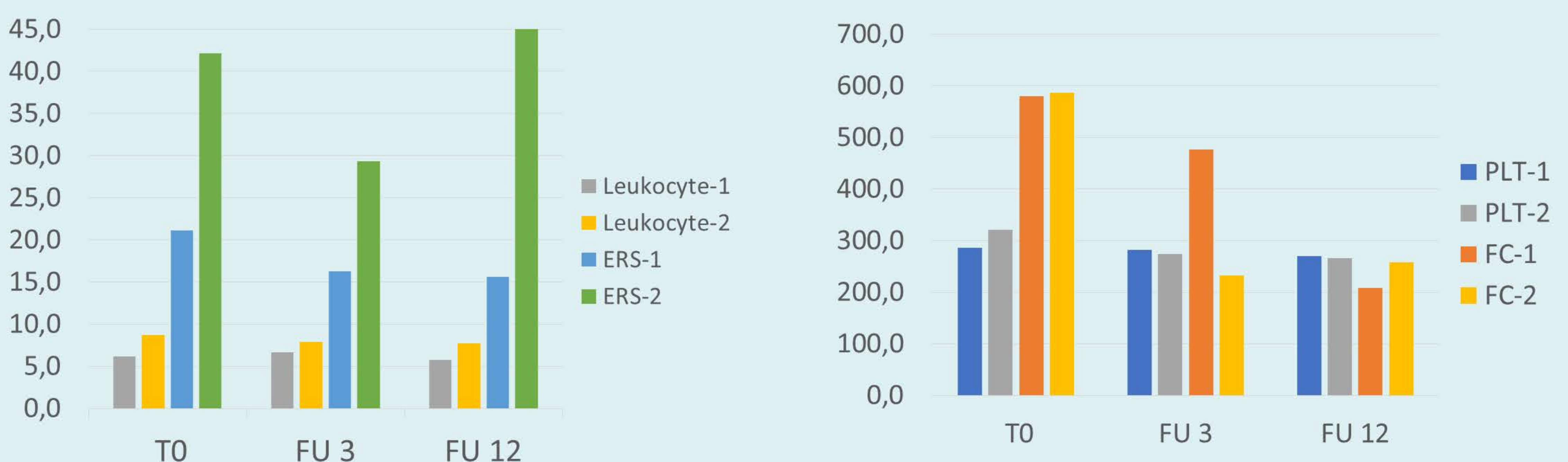
In the second group (Vedolizumab) after 12 months of FU 3 patients achieved clinical remission and 2 patients clinical improvement.

In table 1 is shown the clinical disease activity for each patient based on Mayo partial score (MPS).

The development of the average blood parameters is almost the same in the two groups at 12 months (Figure 1).

Patient	Clinical disease activity			Patient	Clinical disease activity		
	T0	FU 3	FU 12		T0	FU 3	FU 12
1	mild	remission	remission	9	severe	moderate	moderate
2	mild	remission	remission	10	moderate	remission	remission
3	moderate	mild	remission	11	moderate	remission	remission
4	moderate	moderate	Vedolizumab	12	moderate	mild	mild
5	mild	remission	remission	13	mild	remission	mild
6	moderate	mild	adalimumab	14	moderate	mild	moderate
7	mild	mild	adalimumab	15	mild	remission	remission
8	moderate	remission	remission				

**Table 1:** Clinical disease activity, in red patient who received leukocytapheresis, in yellow who received maintenance therapy and in blue who have biological therapy



**Figure 1:** trend of average blood values.

## Conclusion

From this first clinical experience apheresis appears to be effective as second-choice biological drugs. This type of therapy should not be abandoned, but should be investigated further with other comparative study. Could also be evaluated a synergistic approach between these two therapies.