

# Combination therapy with leukocytoapheresys and Vedolizumab in a patient with ulcerative colitis refractory to anti-TNFs.

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## BACKGROUND AND AIMS

Leukocytes (neutrophils, monocytes/macrophages) are major actors in the pathogenesis of IBD, since, once migrated from the peripheral blood to the intestinal wall, actively participate into the inflammatory cascade by releasing cytokines ultimately responsible for bowel damage. The recruitment of leukocytes is increasingly becoming a target for IBD therapy from leukocytoapheresys to anti-integrins and SP1-inhibitors. Moreover, the idea of combining multiple therapies with different mechanisms of action to get a deeper control of inflammation and potentially modify the course of IBD is receiving growing attention by medical researchers. We report a patient with steroid-dependent UC, failure to anti-TNFs, successfully treated with leukocytoapheresys and vedolizumab.

## CASE PRESENTATION

Due to the onset of steroid dependency, clinical and endoscopic worsening, a 45-year-old woman with a diagnosis of ulcerative proctitis was put on infliximab induction and maintenance, optimized every 4 weeks because of loss of response; switched to adalimumab without benefit (primary nonresponse). In October 2016, we decided to swap to vedolizumab. Azathioprine 2.5 mg / kg. was added in December 2016, but disease remained active. She refused colectomy. In February 2017, we decided to submit the patient to therapeutic GMA as adjuvant therapy. The patient received 5 weekly apheresis sessions using LA-25 (Leukocyte Adsorber 25), each ones at 30 ml/min flow rate for 60 min, with a final volume of 1.8 L of peripheral venous blood processed per session. Complete patient history is shown in Figure 1.

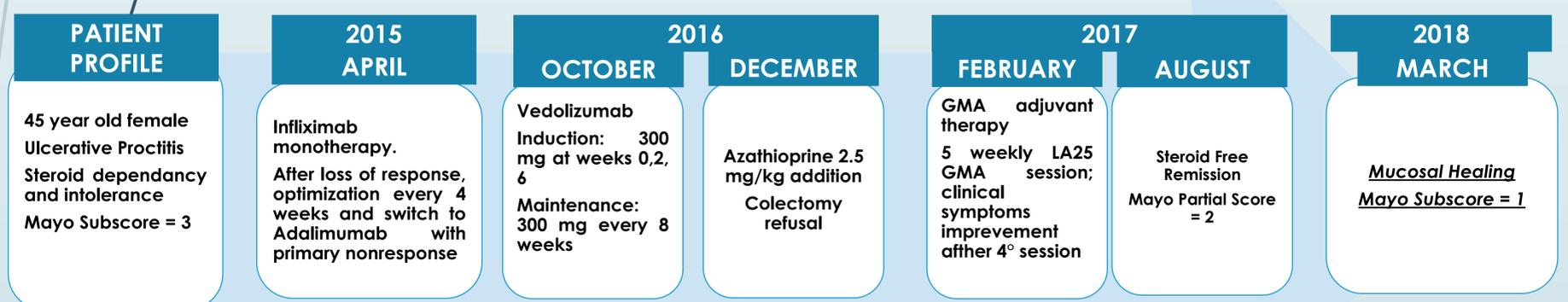


Figure 1: Case History

## RESULTS

A significant improvement of symptoms was reported after the fourth session. Figure 2 shows Partial Mayo Score trend during GMA treatment and at follow-up.

Steroid free remission and mucosal healing were achieved.

Azathioprine has been stopped.

Vedolizumab therapy is ongoing.

No Adverse Events occurred.

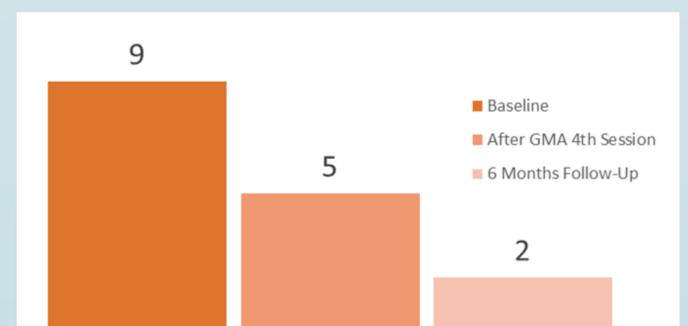


Figure 2: Partial Mayo Score Trend

## CONCLUSION

Apheresis can speed up the response to vedolizumab by selective depletion of activated leukocytes, further reducing cell trafficking. Being a non-pharmacological approach, with no relevant safety signal, the adjunct of apheresis to biologics could represent a valid option in patients with UC difficult to treat, with inadequate response to biologics, and should reduce the need of colectomy.