

Adherence to mepolizumab and benralizumab in real clinical practice

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Background

Mepolizumab and benralizumab are two biological drugs used in severe uncontrolled asthma (SUA) patients. There is lack of data in actual clinical practice regarding the relationship of effectiveness and adherence.

Objectives

The aim of this study was to describe the treatment adherence of mepolizumab and benralizumab in SUA patients and to assess the relationship between this adherence and effectiveness.

Material and methods

Retrospective observational study developed in the Outpatient Pharmaceutical Care Unit of a tertiary university hospital. All patients diagnosed with SUA who were under treatment with mepolizumab and benralizumab were included during the period January 2017- March 2021.

Data collected: demographic; pharmacological: drug(mepolizumab/benralizumab), duration of treatment (DOT), concomitant administration of oral corticosteroids (OC), phenotype (eosinophilic/allergic /other).

Non-adherence was evaluated by reviewing all scheduled drug dispensing visits in the computerized application. This fact was considered every time that a patient collected medication later than the scheduled according to frequency of administration (28 days for mepolizumab and 56 days for benralizumab), which dispensation missed (DM) was defined.

The number of DM was identified in mepolizumab (DM-mepolizumab) and benralizumab (DM-benralizumab).

Effectiveness was defined by evaluating at baseline/3/6/12 months: the *Asthma Control Test* (ACT) parameter, forced expiratory volume in the first second (FEV₁), and need for OC.

Results are presented as median (standard deviation (SD)) for quantitative variables and number (percentages) for qualitative variables.

Results

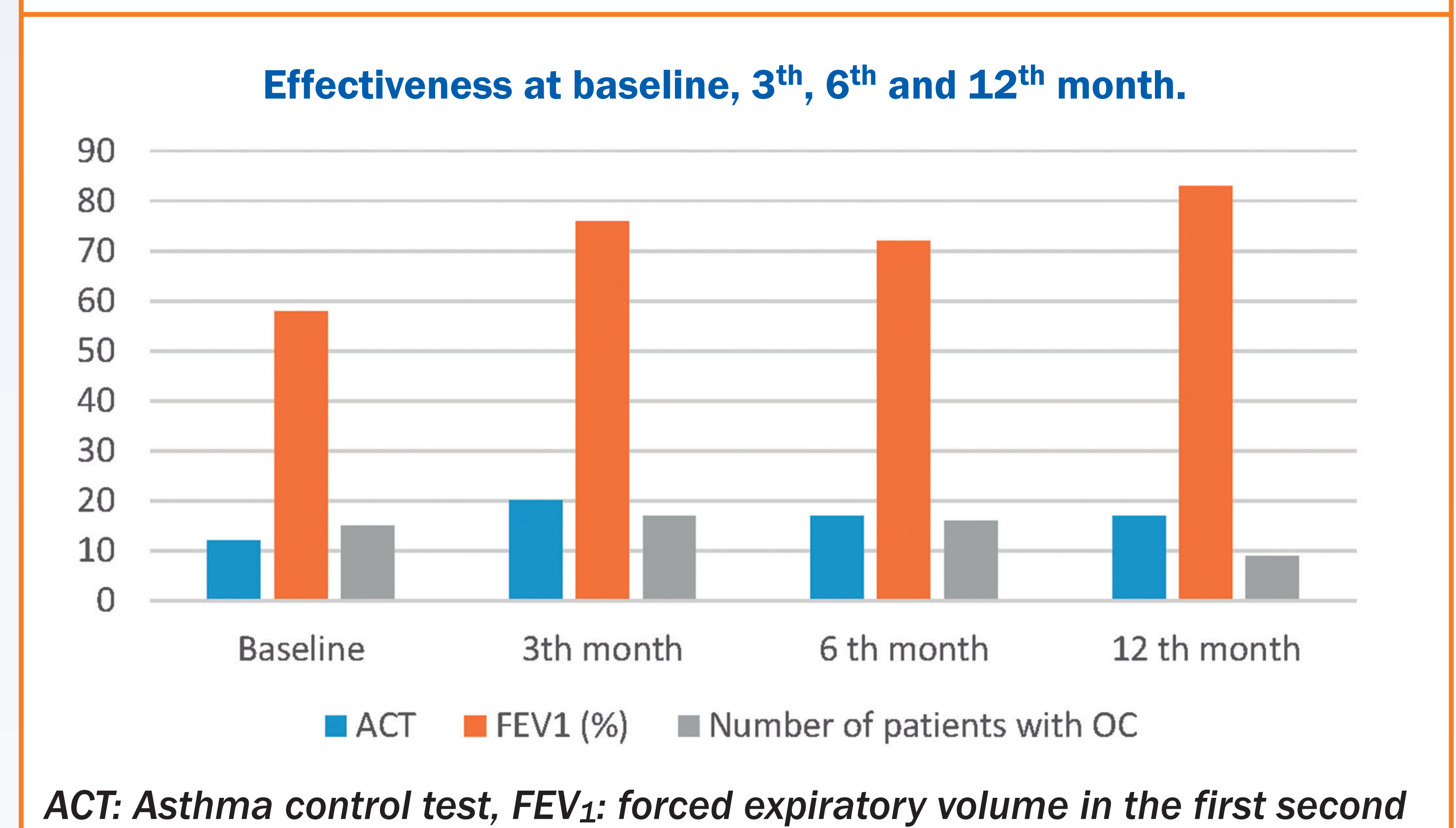
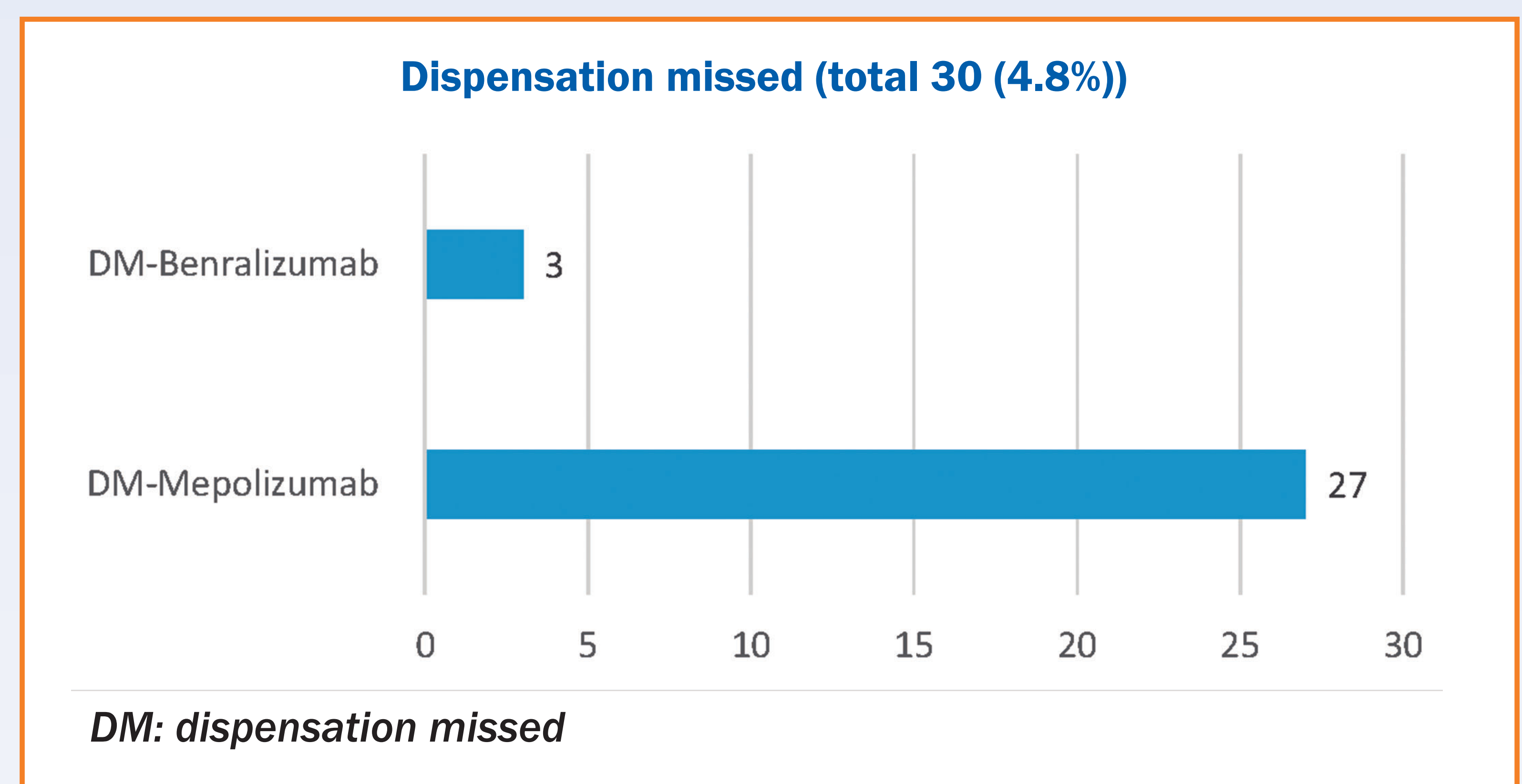
A 622 dispensations were identified: mepolizumab 505(76.5%) and benralizumab 155(23.5%).

Demographic data (n=34)

Variable	Value
Age (years)	59 (SD:12)
Sex (women)	21 (55.3%)
Obese, (>30 kg/m ²)	10 (26.3%)
Race (caucasian)	31 (81.6%)
Treatment with: (*)	
- Mepolizumab	22 (57.9%)
- Benralizumab	16 (42.1%)
Naïve	22 (57.9%)
DOT (months)	20.0 (SD:11.7)
Concomitant administration with OC	15 (39.5%)
Phenotype:	
- Eosinophilic	26 (68.4%)
- Allergic	5 (14.7%)
- Others	7 (18.4%)

* Both drugs were used sequentially in 4 patients (11.8%).

DOT: duration of treatment; OC: oral corticosteroids; SD: standard deviation.



Conclusion

- Mepolizumab or benralizumab were collected later than expected in less than 5% of scheduled dispensations. Thus, a high grade of adherence to these drugs could be considered.
- More adherence to the biological drug was related with higher effectiveness according to the values of ACT, FEV₁ and use of OC for the first year of treatment.