4CPS-061

ASSESMENT OF THE EFFECTIVENESS AND SAFETY OF MEPOLIZUMAB IN A REAL-WORLD LONG-TERM STUDY

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BACKGROUND AND IMPORTANCE

Mepolizumab is an anti-IL-5 monoclonal antibody used for the treatment of uncontrolled severe asthma (USA). The treatment of USA with biological therapy is considered a challenge due to the **lack of long-term real-world information**.

AIM AND OBJECTIVE

The objective is to asses **real-world** Mepolizumab treatment carried out in patients with USA to determine its **long-term effectiveness and safety**.

MATERIALS AND METHODS

Design: Retrospective real-world observational study in patients treated with Mepolizumab between 01/2015 and 12/2022. Variables analyzed before the start of mepolizumab, one year after treatment, and at the last medical consultation recorded in the Electronic Health Record.

Recorded Variables:

Demographic variables: gender, age, BMI.
Laboratory parameters: Eosinophil level.
Respiratory functional parameters: FEV 1 (%).
Asthma control parameters: ACT score, exacerbactions/year, hospital admissions/year.

ACT
(Asthma Control Test)

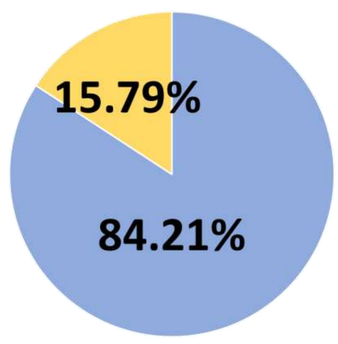
≥ 20 →Well-controlled asthma
19-16 → Poorly controlled asthma
≤ 15 →Very poorly controlled asthma

RESULTS

Sample description:

- N= **96 patients.**
- Gender: **70.83% women**
- Median age (years): **59** (50 – 69)
- Median BMI: **29.03** (24.01 – 31.21)

19 discontinuations (19.79%)



Evolution	Outcomes before biological treatment	Outcomes after one year of treatment	Outcomes of the last cosultation
Median Eos (cel/µl)	800 (500 – 1300)	100 (0 – 100)	100 (0 – 100)
Median FEV 1 (%)	76 (60.5 – 87.5)	86 (73 – 97)	85 (73 – 90)
Median ACT	15 (10 – 18)	21 (19 – 24)	21 (19 – 25)
Median GCO cicles	2 (1 – 3)	0 (0 – 1)	0 (0 – 1)
Median hospitalizations/emergency visits	1 (0 – 1)	0 (0 – 0)	0 (0 – 1)

CONCLUSION AND RELEVANCE

The use of mepolizumab improves lung capacity (increase in FEV1), clinical control of the disease (increase of up to 6 points in ACT), and reduces the number of exacerbations and hospital admissions/emergency visits. Therefore, treatment with mepolizumab can be considered **effective** (functional and clinical improvement) **and safe in the long term**. Further studies are needed to allow for better treatment selection to reduce discontinuations due to inefficacy.

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