

EFFECTIVENESS AND SAFETY OF ANTI-IL-5 BIOLOGIC AGENTS IN SEVERE EOSINOPHILIC ASTHMA



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BACKGROUND

- **Severe uncontrolled asthma** is characterised by **poor control** despite the treatment with inhaled glucocorticoids (IGC) and beta2 adrenergic agonists (LABA) at high doses, and /or oral glucocorticoids (OGC).
- This type of asthma comprises a heterogeneous group of phenotypes treated with targeted therapy.
- **Anti-IL-5 monoclonal antibodies (mepolizumab, reslizumab and benralizumab)** are indicated in **severe eosinophilic asthma (SEA)**.

AIM AND OBJECTIVES

Assess the **effectiveness and safety of anti IL-5 biologic agents** in a tertiary-level hospital.

MATERIALS AND METHODS

- **Retrospective observational study** included patients with SEA under treatment with anti IL-5 agents from June 2017 to August 2019.
- Electronic clinical record was used to obtain:
 - ✓ **Sociodemographic variables** (age, sex, concomitant medicines and previous biologicals).
 - ✓ **Effectiveness** (reduction of eosinophil blood levels, change in levels of exhaled nitric oxide (FeNO), forced expiratory volume in the first second (FEV¹) and score in the asthma control test (ACT)).
 - ✓ **Safety** (reported adverse effects).



RESULTS

- **34 patients** were included: **67.6 % (23) women. Mean age: 56.2 (41-69) years.**
- **56% of patients were diagnosed with SEA** and 44% had mixed eosinophilic-allergic phenotype.
- **All patients received IGC + LABA at high doses.** 13 patients were taking montelukast and 2 OGC at low doses.
- **53% (18)** received **omalizumab** previously.

EFFECTIVENESS	Average duration (weeks)	Eosinophils (cells/ μ l)		▲ FeNO (ppb)	▲ FEV ¹ (ml)	▲ ACT (points)
		Previous	After			
Mepolizumab (n=20)	40	840.6 (400-2012)	143.75 (0-500)	- 17.14 (0-89)	0.325 (0.12- 0.65)	6 (2-9)
Reslizumab (n=4)	27.7	420 (100-1000)	50 (0-100)	- 24.5 (0-35)	0.4 (0.17-0.45)	4 (2-6)
Benralizumab (n=9)	19.9	622.2 (0-1900)	66.6 (0-600)	- 22.6 (0-43)	0.36 (0.07-0.84)	2.4 (0-6)

SAFETY

- **Mepolizumab:** 2 patients (10%) developed respiratory infection and 1 patient (5%) back pain.
- **Benralizumab:** 2 patients developed myalgias (22.2%) and 1 patient (11.1%) diarrhea.

CONCLUSIONS

- **Anti-IL5 therapy is effective and safe.**
- **Adequate monitoring** is needed in order to optimize the treatment.

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