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Title: Biomarkers expression, treatment and disease burden in a cohort of Italian patients affected by severe asthma: a sub analysis of the ISAR EVEREST study. [151/205]

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Background: Asthma is a heterogeneous disease with a complex pathophysiology that presents with a wide range of clinical manifestations and treatment responses. A deep knowledge of the characterization of severe asthmatic population, together with the associated burden, is essential to better understand disease trajectories. Here, we present the results of a sub analysis conducted on the Italian cohort of the ISAR EVEREST study, with the aim to bring an updated picture of clinical features of Italian patients with severe asthma.

Method: The ISAR EVEREST study described characteristics and unmet needs of subtypes of severe asthma patients including data on biomarkers and eligibility to current treatment. Exacerbation, healthcare resource utilization, and asthma control in the 12 months prior to ISAR cohort entry were described. Analyses were conducted among patients with complete records.

Results: 1424 patients were included in the sub analysis [61.7% female, mean age 55.5 ±12.9, mean BMI 26.2 ± 4.9, smokers = 52 (3.7%), former smokers = 350 (25%)]. Median blood eosinophil count was 500.0 (IQR, 230.0 – 840.0) cells/µL; 248 (28.5%) patients had <300 cells/µL and 622 (71.5%) had ≥300 cells/µL. Median IgE count was 188.0 (IQR, 71 - 425.5) kU/L; 212 (26.1%) patients had <75 kU/L and 600 (73.9%) had ≥75 kU/L. Median FeNO value was 34.0 (IQR, 19.0 - 60.2); 195 (36.9%) patients had <25 ppb and 333 (63.1%) patients had ≥ 25 ppb. Looking at therapeutic options, use of biologics was reported in 684 (48%)

patients, while 245 (17.2%) patients were under long-term OCS use. Asthma was well controlled in 354 (26.5%) patients, while 983 (73.5%) had partially or not controlled asthma. 751 (65.1%) patients had at least 1 exacerbation, in particular 596 (51.7%) had ≥ 2 exacerbations. At least one hospital admission was observed in 154 (12.2%) patients.

Conclusion: In the Italian cohort of the ISAR EVEREST study, patients presented with heterogenous phenotypes and expression of different biomarkers, as expected, being the patients with ≥300 eos/μL and with ≥75 IgE kU/L the most frequent subtype. The concomitant burden of illness, relevant in terms of poor asthma control and occurrence of exacerbations, as well as the high OCS use, highlight the importance of a holistic patient phenotyping and better asthma management.
This abstract is written on behalf of the SANI and ISAR EVEREST Study Groups.

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