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Late Breaking Abstract - Impact of airflow obstruction severity on mepolizumab response in COPD with an eosinophilic phenotype: optimising quality of life by timely intervention in patients with GOLD 2 while maintaining exacerbation reduction across all GOLD grades

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Background: In patients with COPD with an eosinophilic phenotype, progressive airway inflammation increases exacerbation risk and drives the worsening of outcomes, including health-related quality of life (HRQoL).

Aims: Evaluate mepolizumab efficacy across varying screening blood eosinophilic counts (BEC) and airflow obstruction levels (GOLD 2 & GOLD 3+4).

Methods: Integrated analysis of Phase III trials METREX, METREO and MATINEE (52–104 weeks) compared mepolizumab 100 mg with placebo. Outcomes included annualised rates of moderate/severe exacerbations, those requiring ED visit/hospitalisation and SGRQ responders at Week 52.

Results: The annualized rate of moderate/severe exacerbations was reduced with mepolizumab vs placebo by 22% (BEC ≥150 cells/μL) and 18% (≥300 cells/μL) in patients with GOLD 2 and similarly by 19% (BEC ≥150 cells/μL) and 24% (≥300 cells/μL) in those with GOLD 3+4. Similar trends were observed in exacerbations requiring ED visit and/or hospitalisation. The odds of SGRQ response (≥4-point decrease) were higher with mepolizumab vs placebo in the GOLD 2 group regardless of BEC: 38% (BEC ≥150 cells/μL) and 37% (BEC ≥300 cells/μL); those in the GOLD 3+4 group had notably lower SGRQ response rates (6% and 14%, respectively) (Table).

Conclusions: Mepolizumab improves exacerbation outcomes regardless of airflow obstruction level and BEC. SGRQ response was stronger in patients with GOLD 2, suggesting timely initiation of therapy may prevent decline in HRQoL.

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