1.16 Perception vs Prediction: A Dual Lens on Asthma Exacerbations

Dr Cara M Gill[1,2], Mr Ahmed Allami[3], Dr Ciara Ottewill[1], Ms Orla Smith[1], Ms Helen Doherty[1], Dr Elaine MacHale[1], Prof Richard W Costello[1]
[1]Department of Medicine, RCSI, on behalf of HSE Digital Living Lab, Dublin, Ireland. [2]StAR MD Programme, Mater Private Hospital, Dublin, Ireland. [3]RCSI, Dublin, Ireland

Background: Asthma is a heterogenous clinical disease. Exacerbations represent an acute worsening of symptoms and decline in lung function from the patient's usual status[1]. They can significantly reduce patient's quality of life.

Methods: 100 patients with severe and difficult to treat asthma on digital adherence monitors and peak flow meters were included. Adherence, peak flow variability and exacerbation frequency were recorded.

Results:

Patient Reported Exacerbations

Forty-eight patients (48%) reported an exacerbation during the monitoring period. The device also recorded a concurrent exacerbation in 27 of these (56.25%). Peak flow data was not available for seven patients (14.25%).

Device Predicted Exacerbations:

The device predicted an exacerbation in 54 patients (54%) undergoing monitoring. Of these predicted exacerbations, patients concurrently reported symptoms in only 50% (n=27).

Adherence:

Overall mean ICS/LABA adherence in non-exacerbators vs exacerbators was 67.59% vs 54.78% (p 0.07).

Conclusion: Patients perception of an exacerbation does not always correlate with peak flow data suggestive of an exacerbation. Exacerbations may be due to factors other than variable airflow limitation, or patients may mask changes in peak flow with excess SABA use.

References:

1. Global Initiative for Asthma. Global Strategy for Asthma Management and Prevention, 2024. Uodated May 2024. Available from: www.ginasthma.org

Irish Thoracic Society Annual Meeting 2024