

1.18 Impulse oscillometry: Tuning into the subtle frequencies of lung function.

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Background: Impulse oscillometry (IOS) is a diagnostic method for assessing airway obstruction by quantifying airway impedance through resistance and reactance, based on the Forced Oscillation Technique. Unlike spirometry, IOS is effort-independent, making it suitable for patients unable to perform forced expiratory manoeuvres. **Methods:** The primary objective was to assess the indications for IOS. The secondary objectives included evaluating the diagnostic value of IOS in identifying airway obstruction when spirometry results are normal and determining the accuracy of IOS interpretation. A single-centre audit included 13 asthma clinic patients (2022-2024). Data were anonymised in compliance with GDPR. **Results:** The median age was 49 years, with 77% female. Median FEV1 was 94%, and median BMI was 27 kg/m². Among patients, 38% had small airway obstruction, 23% had abnormal IOS, and 15% had borderline IOS. 33.3% with normal or poor quality spirometry had evidence of obstruction on IOS. 25% with a normal %PredFEF25-75 had evidence of obstruction on IOS. **Conclusions:** All patients had appropriate IOS indications. Future directions include standardising approaches, creating reference ranges through larger validation studies, and exploring the relationship between IOS and CT lung densitometry. **Disclosures:** Conflict of Interest: **The Authors declare that they have no conflict of interest.**