

Abstracts of the three prize winning posters presented at the British Rhinological Society, Nottingham, May 2005

Poster 1. Evidence for a correlation between objective and subjective measures of nasal obstruction

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Aims: There is a general clinical opinion that objective measures of nasal obstruction do not correlate, or correlate poorly with subjective measures of nasal obstruction. This study was designed to investigate the relationship between objective and subjective measures of nasal obstruction by asking participants with a common cold to measure their total nasal flow, unilateral nasal flow and difference between the unilateral nasal flows subjectively. The results were correlated to the corresponding objective measures.

Method: Sixty otherwise healthy participants suffering with a common cold were recruited into the study. A 100 mm visual analogue scale was used to subjectively measure nasal obstruction. Rhinomanometry was used to measure the corresponding objective measures of nasal obstruction. Total nasal flow, unilateral nasal flow and the difference between unilateral flows were measured objectively and subjectively.

Results: The objective and subjective measures of total nasal flow did not correlate significantly ($r = 0.17$, $p = 0.21$). A significant correlation was measured for the unilateral nasal flow ($r = 0.5$, $p < 0.001$). When participants compared the difference in flow between the nasal cavities a large and significant correlation was measured ($r = 0.68$, $p < 0.001$).

Conclusion: This study reports a large and significant correlation between objective and subjective measures of nasal obstruction when the difference in airflow between the nasal passages is compared. Objective measurements that incorporate this comparison, such as the rhinospirometer should correlate well with the patients symptoms of nasal obstruction and would be a useful aid in the assessment of patients with nasal obstruction.

Poster 2. The nasal valve: inaccuracy of the terms "internal" and "external" nasal valve

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Aims/Objectives: The "internal" and "external" nasal valves are thought to function separately. The authors aim to demonstrate that this is inaccurate.

Material and Methods: The cross-sectional area of the "external" nasal valve was reduced by 50% without affecting the "internal" valve, in order to assess the subjective effect on nasal airflow in 20 healthy volunteers.

Results: Sixteen patients felt no nasal obstruction. Of the 4 who did, the study was repeated with 30% occlusion of the "external" nasal valve and none felt any obstruction.

Conclusions: If the "external" nasal valve were a true valve, we would have expected this degree of occlusion to be noticed by most subjects. The "external" nasal valve cannot be considered a separate entity from the "internal" nasal valve as one cannot collapse without a degree of collapse of the other to which it is inherently attached. The Bernoulli principle suggests that the alar rim makes little contribution to resistance of the nose in normal individuals. Our study demonstrates this, which suggests that the terms "internal" and "external" nasal valve should be replaced with the term nasal valve to refer only to the area formerly considered as the "internal" nasal valve.