Correlation Between Nasal Function Assessment Scores in Cleft Palate Patients

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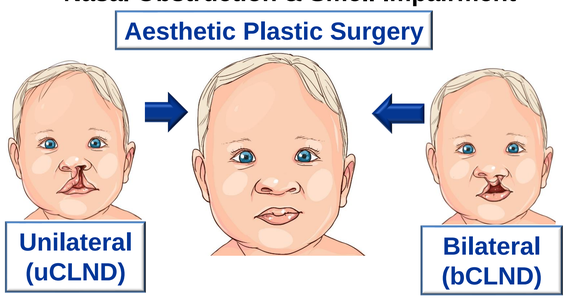
BACKGROUND

- Numerous nasal anatomical malformations comprise unilateral cleft lip nasal deformity (uCLND).
- Obstructive breathing is between 20 and 30% greater in uCLND patients compared to the general population and 70% of uCLND patients report impaired nasal breathing.[1-6]
- The Standardized Cosmesis and Health Nasal Outcomes Survey (SCHNOS) and Nasal Obstruction Symptom Evaluation (NOSE) are two subjective, patient-reported questionnaires assessing nasal function.
- *Objective:* To investigate the correlation between two patient reported scores of nasal function.

Figure 1: Cleft lip nasal deformity and its repair



METHODS

- 9 uCLND subjects received surgical repair between November 2019 and December 2022
- Patients filled out SCHNOS and NOSE questionnaires pre-operatively and at 4 post-operative visits.
- SCHNOS Obstructive (SCHNOS-O) and NOSE scores at each visit and trends between visits were compared for concordance.

Figure 2: SCHNOS-O and NOSE scores for each patient visit

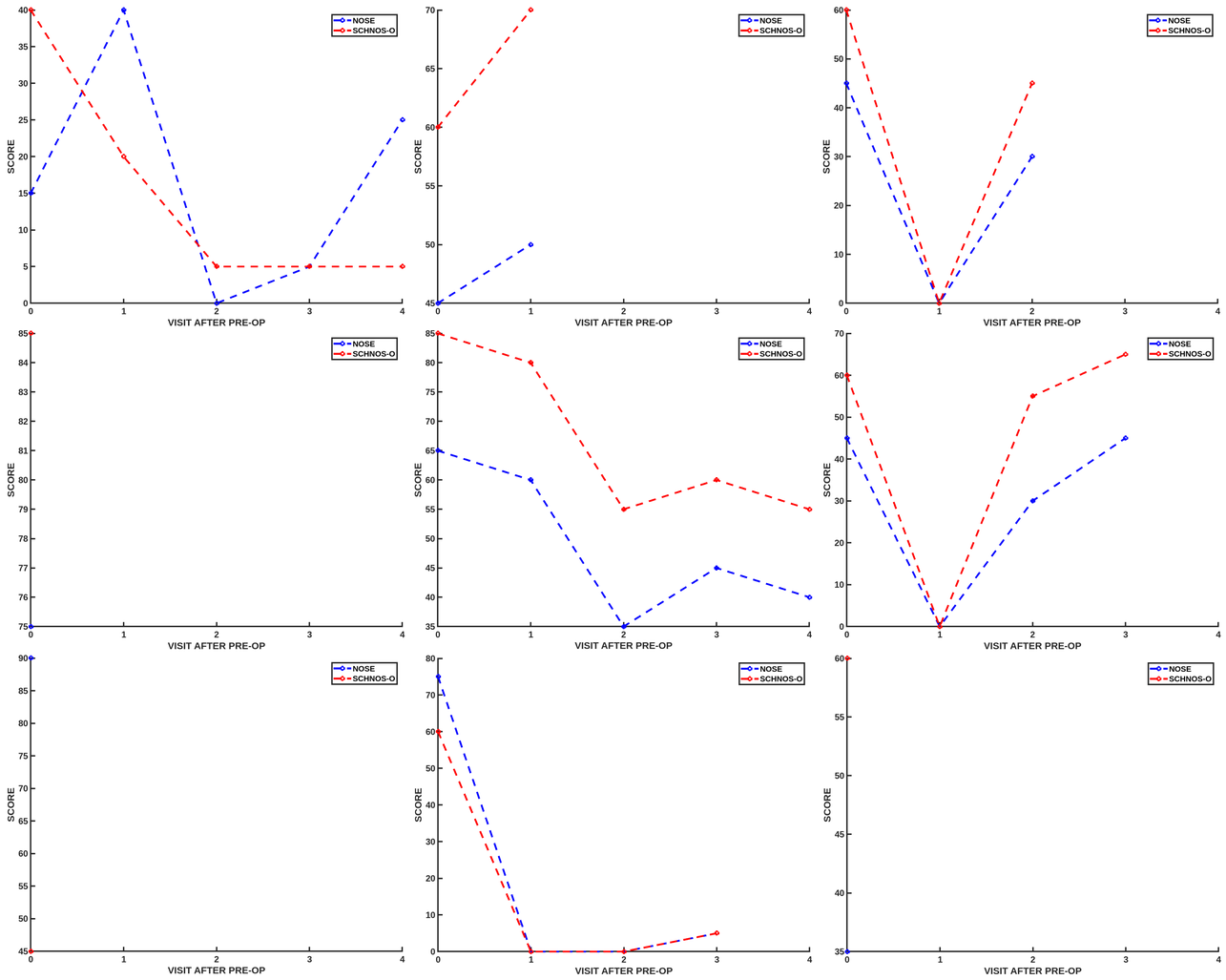


Table 1: Components of each nasal function questionnaire

Score (0-5 with 0 lowest)	
SCHNOS-O	NOSE
Nasal blockage	Nasal congestion
Congestion	Difficulty Breathing
Difficulty breathing through nose during exercise	Trouble sleeping
Difficulty breathing through nose during sleep	Air hunger sensation
	Blockage

RESULTS

- 6 patients completed at least one follow up visit, of which 2 had clinically significant improvements in NOSE score while 3 had clinically significant improvements in SCHNOS-O score.
- The average absolute difference between NOSE and SCHNOS-O for each individual visit was 17.
- Intra-patient, same-visit variations ranged between 8 and 45 with a median of 15.
  - Variation was generally lower in patients who completed more post-operative visits.
- Trends in directionality across visits was generally consistent between NOSE and SCHNOS-O scores.
- Of the 3 identical categories (congestion, blockage/obstruction, air flow during exercise), in 24% of the observations, sub-scores differed by more than 1 point.

CONCLUSIONS

- Both questionnaires showed the same trends across visits, but there was substantial difference in overall score between the two surveys.
- Scores were inconsistent in around one quarter of cases where patients answered the same question on both surveys

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