Nasal air flow measurement

Sir,

We congratulate Dr. Besar for designing an instrument to measure nasal air flow. However, we would like clarification on the following.

(a) Influencing factors. (i) cavities and spaces in the airways of those using blowing types of musical instruments regularly over the years vary from other healthy subjects. Hence this should be considered by the authors. (ii) High arched palate, hypertrophied nasal concha and deflected nasal septum will likely alter the measurement, and (iii) Ethical and racial influences in the airway should have been looked into.

(b) Limitations and interferences. While appreciating the advantages of the author’s instrument, as end users we would like to know more about the limitations and interferences of the new equipment.

(c) Comparative analysis. As the author had made an earlier similar study using selected English phonetics, he should have made a comparative analysis, possibly in the same subjects, in order to strengthen his aims and objectives. Moreover, such a comparative study will motivate doctors speaking different languages to design a similar study and prepare a standard.

(d) Necessity. Last but not least, from the administrative point of view, which category of healthy army personnel require nasal air flow measurement either at selection or after recruitment?

As the author has made pioneering works, we look forward to hearing more from him based on his works in various sub sections and its application as well as limitations.

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(a) Influencing factors. The instrument has many applications. But the 2 main applications are: (i) Screening: selecting the normal subjects, as outlined in a recent publication: “Nasal Airflow Measurement in Normal Subjects by Using Arabic Word Phonetics”. The mean airflow for each word is defined by the minimum value and the maximum value. Out of these values the subject is considered to be abnormal. (ii) Assessment of treatment: To do so, we can use the above statistical method, and also there is a part of the software associated with the system to make a Kendall’s tau statistics. Using this technique we can gain knowledge about the enhancement of the patient.

(b) Limitations and interference. The instrument is BSI standard from the point of view of medical safety. The maximum velocity of airflow of the sensor is 20m/s, which is very far from the nasal airflow velocity.

(c) Comparative analysis: Articulation and pronunciation differ from one language to another, also within different communities of the same language. So, for each language a practical study should be carried away to select the nasal and non-nasal word of the test.

(d) Necessity: In general, the system is used in the diagnosis of the upper respiratory system. It could be used in periodic tests for pilots, TV presenters, and all users of communication systems. It also can be used during the training of speech therapists.

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References