Title : Peak Nasal Inspiratory Flow: reference value for Asian Ethnic.

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Objectives

To establish normal value of Peak Nasal Inspiratory Flow (PNIF) for Asian Ethnic. To assess correlation of PNIF normal value with sex, age, weight, height and body mass index (BMI) in adults. To assess the correlation between PNIF and Nasal Airway Resistance (NAR) and Nasal Airflow, which are measured by Active Anterior Rhinomanometry (RMM).

Study design: Prospective descriptive and inferential study.

Methods PNIF and RMM were measured in 180 healthy Thai adults who fulfilled the study criteria with age ranging from 15 to 70 years. PNIF and RMM were performed before and after decongestion, using a portable Youlten peak flow meter (Clement Clark International, UK)

Results: One hundred and eighty patients were included (82 male , 98 female). The mean of age was 38.94+13.73 years, weight 61.85+14.78 kg., height 162.93+8.21cm. and BMI 23.17+4.66. The mean of the PNIF was 116.21+38.44 L/min before decongestion and 132.7+47.6 L/min post decongestion. There was statistical significant correlation (p < 0.0001) between PNIF with sex; and no correlation with age, weight, height and BMI. The value of PNIF was significantly higher in male subjects. The mean PNIF of male and female are 139.02+37.62 L/min and 97.11+27.13 L/min, respectively.

Conclusion: PNIF is a useful method to evaluate the nasal patency in both primary and secondary care centers. The study provides normative data for Thai and Asian population. The male PNIF has significant different than female.

Keyword : Peak Nasal Inspiratory Flow, Rhinomanometry, nasal obstruction, normal values, sex, age, weight, height, body mass index (BMI).