SATISFACTION WITH AN IN-HOUSE DEVELOPED NASAL FOREIGN BODY REMOVAL MANIKIN: A RANDOMIZED-CONTROLLED TRIAL

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Background: Nasal foreign bodies can lead to life-threatening conditions. Hence, it is a necessity that physicians be well trained in the appropriate procedures for removal of nasal foreign bodies. However, training on real patients is not only unpractical it is also too dangerous, due to risk of foreign body aspiration during the procedure.

Objective: To construct a manikin, with a specific design, to serve all possible needs for training.

Design: A randomized controlled trial with a crossover design.

Methods: The in-house manikin was developed from 2 materials; flexible polyurethane foam and silicone. Silicone, which has elasticity similar to nasal alae, was used to develop the detachable nose and nasal cavity, whilst polyurethane foam, which is light and easy to carry, was used to develop the head. The in-house manikin was compared with a commercial manikin for satisfaction after a nasal foreign body removal procedure was performed in both groups, by 37 physicians, after conducting a randomized controlled trial with a crossover design.

Statistical analysis: A Wilcoxon signed-rank test was used to compare the satisfaction scores between the in-house and commercial manikin. A P value lower than 0.05 was considered as statistically significant. Simple and multiple linear regression were used to assess which variables were independently associated, with a total satisfaction score difference between the inhouse and commercial manikins. Baseline characteristics, including medical specialty, age, gender, time experience as a general physician or an ENT specialist, were assigned as independent variables. The total satisfaction score difference between the in-house and commercial manikins was assigned as a dependent variable. This total satisfaction score difference was calculated from a different value of score summations in each dimension between the in house and commercial manikins. The Shapiro–Wilk test was used to test the normality of the dependent variables. In the simple regression analysis, a threshold of a p value less than 0.1 was used to identify candidates for inclusion in the multiple linear regression.