26404 - A COMPARISON OF THE UPPER LIP BITE TEST WITH STERNOMENTAL, THYROMENTAL AND INTER-INCISOR DISTANCES IN PREDICTING DIFFICULTY IN INTUBATION IN IMAM KHOMEINI HOS

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Background and objectives:

Difficult intubation, often unexpected, remains a primary concern for the anesthesiologist. The purpose of this study was to compare the sensitivity and specificity of Upper Lip Bite Test with sternomental, thyromental, and inter-incisor distances in predicting difficulty in intubation.

Methods and Materials:

In a prospective study, 380 patients scheduled for surgery under general anesthesia were enrolled. In all the patients, sternomental and thyromental, and inter-incisor distances were evaluated, and Upper lip bite test class determined pre-operatively. The Cormack and Lehane grade was determined in all the patients after induction of anesthesia, and grades 3 and 4 were considered as difficult intubations. The best points with the highest accuracy were determined by ROC curve. Sensitivity and specificity of these tests in predicting difficult intubation were calculated and evaluated.

Results:

In 19(5%) of patients, intubation was difficult. Upper lip bite test class, inter-incisors < 4.5 cm, thyromental distance < 6.5 cm and sternomental distance < 13 cm were considered difficult intubations. There was no significant difference between both sexes as regards difficulty in intubation, but all the above parameters in the range specified above for difficult intubation had a direct bearing and relation with difficult intubation and the results were statistically significant ($p < 0.05$, McNemar). The specificity and accuracy of upper lip bite test were statistically higher than thyromental, sternomental, and inter-incisor distances ($P < 0.05$). Upper lip bite test had the highest specificity compared to that of inter-incisor, thyromental, and sternomental distances which were 77.7%, 70.64% and 82.27% respectively. Likewise Upper lip bite test had the highest accuracy of 91.05% compared to 76.58%, 71.32% and 81.84% respectively for inter-incisor, thyromental and sternomental distances.

Conclusion:

We conclude that both specificity and accuracy of the Upper lip bite test were significantly higher than that of inter-incisor, thyromental, and sternomental distances, and hence was a more accurate test in predicting difficulty in intubation.