Can handkerchiefs be suitable for mouth-to-mouth ventilation?

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OBJECTIVE

This study analyzed whether handkerchiefs carried by many people can be ventilate as an alternative way to the Face Shield (FS).

METHODS

The inflow ventilation volume (ml) was measured using a manikin(Resusci Anne) with three different fabric handkerchiefs (plain weave, twill weave, satin weave) and FS. Furthermore, plain weave was compared with FS in the number of four types of yarns (210, 240, 250, 260). Each of measurement was performed 10 times. The paramedics held the mask for ventilation using the EC technique of both hands. The differences in mean ventilation volume were analyzed by one-way analysis of variance and Tukey's multiple test. The level of significance for decision making was set at $\alpha = 0.05$ (2-tailed).

figure 1 :Experimental equipment and methods

figure 2 :Type of handkerchief

RESULTS

figure 3 :Relation of weave and average ventilation

figure 4 :Relation of yarns and average ventilation

DISCUSSION

Satin, the dough is rough, is more ventilated than the other two. In terms of plain, as the density increases, the amount of oxygen supply decreases. But since the number of common handkerchief yarns on the market is 190 to 260, at least the same amount of ventilation can be expected compared to the Face Shield.

CONCLUSION

In the case of not considering the infection, It was suggested that handkerchief could be used as an alternative to the Face Shield.

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