

Prevention of Fogging of Magnifying Loupe with Surgical Mask Tying: Our Experience

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Abstract

Fogging of the surgical loupes is a common problem for every surgeon. Not only the surgical loupes, any of the eye protection goggles used during surgery can have fogging. There have been various methods to prevent this like applying adhesive tape over the upper part of the mask, anti-fogging coating over the goggles etc. Recently, we came across an article on a novel method of tying a surgical mask to prevent fogging and tried it. We would like to share our experience.

Keywords: Fogging; Loupes; Surgical mask tying.

Introduction

Magnifying loupes are an important part of armamentarium in an operation theatre for not only plastic surgeons but also cardiothoracic surgeons, urologists etc. Eye protection goggles are a part of universal protection kit.¹ Reports are seen regarding the non-compliance of the use of these due to fogging.² There have been various methods of preventing this including use of anti-fogging coating, application of adhesive tape over the upper part of the face mask³ etc. One of the method we came across recently described a novel method of tying of the surgical mask.⁴ In this the author described knotting the superior tie first with it lying directly below the ear. The inferior tie is brought up in front of the ear and knotted over the crown of the head (Figure 1). We would like to share our experience with the use of this method.

Materials and Methods

We have used the above mentioned method of tying surgical mask in six surgeons. Feedback was obtained from them using a proforma (Figure 2).



Fig. 1: Method of tying the surgical mask

Questionnaire	
Feedback form	
1. Utility of the mask:	Poor/Average/Good
2. Did the mask prevent fogging:	Yes/No
3. Comfort of the surgeon:	Comfortable/Uncomfortable
4. Would you like to recommend your colleague for usage of this device:	Yes/No
Suggestions if any	
<input type="text"/>	

Fig. 2: Feedback form



Fig. 3: Conventional method of tying a surgical mask

Discussion

Magnifying loupes and eye protection wear are important in surgery for personal protection and patient safety. Fogging is common problem which leads to reduced visual acuity⁵ and leads to reduce compliance for their use.

The conventional method of tying a surgical mask leads to the exhaled air coming out through the mask on the superior aspect leading to fogging (Figure 3). In the method described by Jordan et al. where the surgical mask was tied in a specific way it has lateral vents which caused the exhaled air to come out from the lateral aspect rather than on to

the superior aspect towards the loupes. This leads to reduced fogging. We have used this method in 6 plastic surgeons and obtained feedback from them. All the surgeons agreed that this method is effective. However one surgeon felt the tying of the mask in this particular way has led to increase slipping. All surgeons agreed that they would recommend it to other surgeons.

Conclusion

We found the method useful in prevent fogging. However large trials are required to prove its efficacy.

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