Case Report

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Role of Cost-effective Magnifying Glass in Clinical Practice of Plastic Surgery

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Abstract

The use of cost-effective magnifying glasses is innovation in the field of microsurgery. Magnification methods usually in practice are microscopes and binocular loupes. Foldable magnifying eye glass is a new addition. It is readily available at a low cost, convenient to carry and easy to use.[1] Wound inspection, Diagnosis of skin lesions, Tissue visualisation, suturing and suture removal made easy with the help of the cost-effective magnifying glass. In this review article we will assess the multiple roles of cost-effective magnifying glass.

Keywords: Magnifying eyeglasses; Cost-effective; Clinical practice; Plastic surgery.

INTRODUCTION

In daily clinical practice, a plastic surgeon needs the certain amount of magnification for his daily routine clinical examination, procedures and surgeries. During surgical procedure, with magnification, precise anatomy is delineated, neurovascular structures easily identified, better placement of sutures and microsurgical instruments are correctly positioned. Loupes generally have magnification of 2.5x to 5x and microscopes have 6x to 40x. Loupes are custom made but it is difficult to carry and is expensive. This cost-effective Magnifying glass is convenient because it can be easily clipped into glasses and can be folded and carried in our pockets. In this article, we describe the various roles of cost-magnifying lens in plastic surgery.

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MATERIALS AND METHODS

This study was done in the department of plastic surgery department. We used this clip on eyeglasses type foldable magnifying glasses in daily clinical practice in Out-Patient department and in operation theatre during minor procedures and while assisting surgery. The cost of foldable magnifying eyeglasses was around 700 Indian rupees comes in the following specifications. It is available in online portal for purchase. The name of the Eyeglasses is Foldable Magnifier. The Model number is MG19156-2. (Fig. 1 and 2)

The Magnification available in this package were 1.5x, 2.5x, 3.5x. The Weight of the glass is about 85g. It is made up of Plastic and acrylic lenses. This foldable magnifying glass in easily applicable on any spectacles with ease. (Fig. 3) It can be used for clinical examination in out-patient department,

minor day-care procedures and assisting short surgeries.

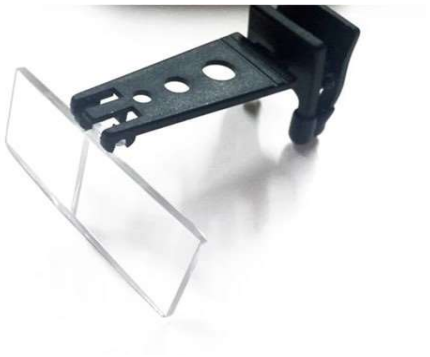

Fig. 1: Magnifying glass assembly

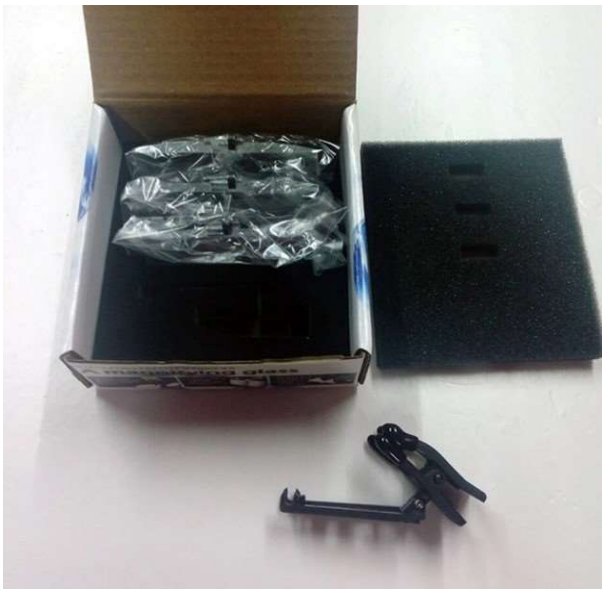

Fig. 2: Set of magnifying glasses

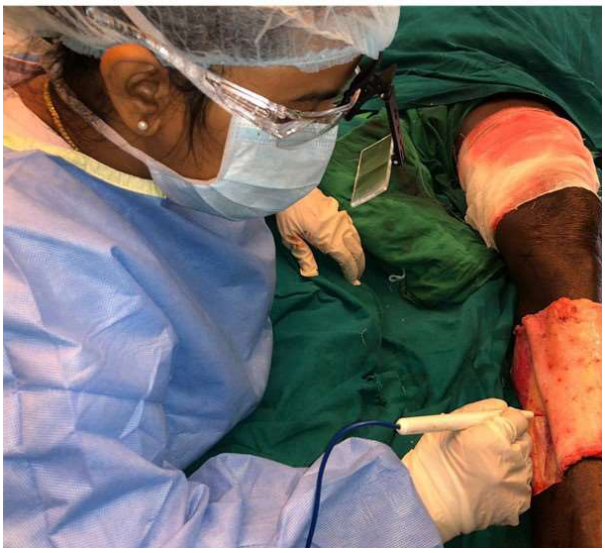

Fig. 3: Magnifying glass used during surgery

RESULTS

It is found to be easy to carry and useful in minor procedures such as suture removal and clinical examination. It is suitable for short surgeries. But during long and microvascular surgery a branded customized loupe provides better magnification. It is easily adjustable after wearing. The added advantage is that it is handsfree and whenever not needed, it can be flipped upwards. The kit contains only three different magnifications and it is not custom made.

DISCUSSIONS

The advent of microsurgery in the 1960's is considered to be one of the most important milestones in recent plastic and reconstructive surgery. Although there is no generally agreed definition, microsurgery may be defined as surgery requiring an operating microscope. The first to coin the term "microsurgery" was the vascular surgeon, Jules Jacobson, who anastomosed blood vessels with a diameter smaller than 1.4 mm with the aid of a microscope. Now a days many surgical subspecialties, such as plastic surgery, trauma surgery, neurosurgery, and maxillofacial surgery, use microsurgery in their clinical routine. Successful microsurgical operations require sufficient training and experience using delicate instruments and suture material of 8/0 and less. 2,3 In addition, optical magnification should be mandatory for precise handling of tissue and sutures.

Advantages of Cost-effective magnifying glass are as follows:

We can use our hands freely when conducting detailed operation. It is easy to carry due to its folding type feature. It can be conveniently used. Viewing objects in three dimensional way by double eye type lens can make it very interesting to do more detailed work. In order to meet different needs, lens with about 1.5x 2.5x 3.5x magnifications are available. Clamp the magnifier on eyeglasses with your hands, lens angle can be adjusted freely. It is foldable, easy to carry.

Disadvantages:

It is not suitable for long and microvascular surgeries. It will be tiring to the eyes if it was used for longer time. The focal length is very less for higher magnification.

CONCLUSION

In our study we found that cost effective magnifying glass is an innovative method to achieve magnification in an easy and convenient way. It can be used in situations of daily clinical practice. It can be used when a loupe is not readily available.

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