

A new, safer technique of holding a needle in a needle holder

C Greenidge

Citation

C Greenidge. *A new, safer technique of holding a needle in a needle holder*. The Internet Journal of Third World Medicine. 2007 Volume 6 Number 2.

Abstract

Sharp injuries rate in the operating room can be as high as 7%. Suture needle stick injuries account for 77% of these sharp injuries.

The aim is to describe a technique of holding a needle during surgery that can significantly reduce the incidence of needle stick injury.

Most surgeons hold the needle in the needle-holder after they have passed the needle through the tissues. This is appropriate if they are about to pass the needle again. However, if they are not about to do so but for example are about tie the suture the needle is now held rigid and poses a definite risk of needle stick injury.

INTRODUCTION

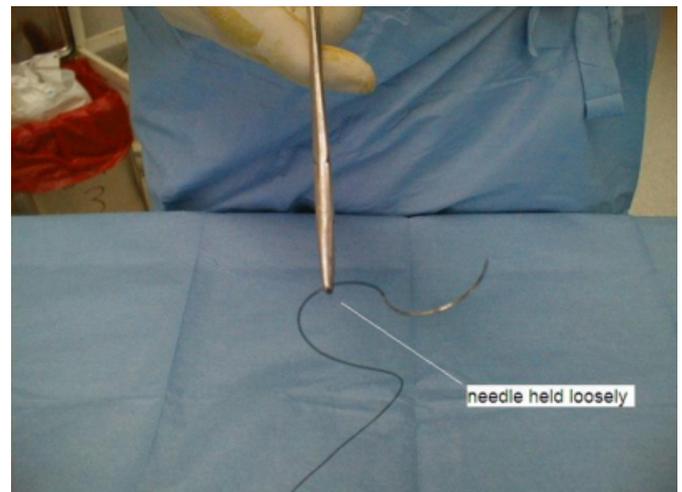
The rate of 'sharp injuries' occurring in the operating room has been reported to be as high as 7% of all procedures performed, with injuries from the suture needle itself accounting for some three-quarters of these sharp injuries (1). This paper describes a safe and simple technique for holding the suture when the needle is not in use that could reduce this chance of inadvertent needle stick injury.

METHOD

It is recommended that after finishing suturing, rather than hold the needle as is the normal custom, that the suture should be held just behind the needle.

Figure 1

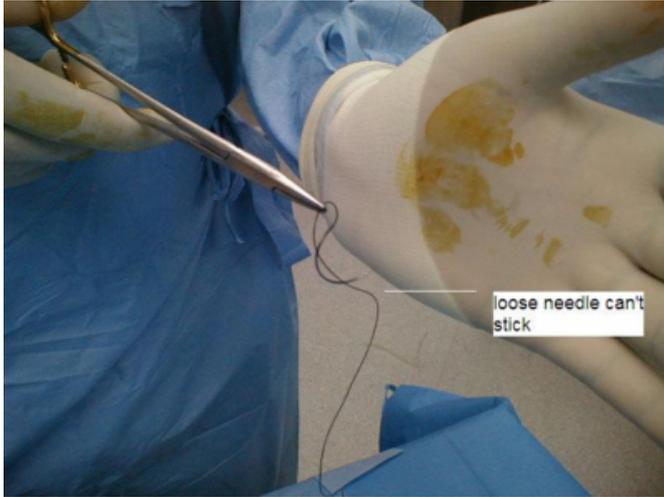
Figure 1: Holding the suture vs. the needle



The needle is now loose and poses very little risk of needle stick injury, however, the combination of suture and needle holder is still together for suture ergonomics and ease of continued use. (Figure 2)

Figure 2

Figure 2: Needle safe yet controlled



DISCUSSION

A technique is presented designed to prevent the risk of needle stick injury posed by needles held within a needle holder but not in active use. This method represents the most common mechanism of intraoperative inadvertent injury.

Most surgeons hold the needle in the needle-holder after they have passed the needle through the tissues which is not specifically appropriate (or ergonomic) if a suture is about to be tied, particularly if the surgeon holds the needle holder whilst hand tying. Moreover, the loaded needle holder placed down on the patient represents a real risk for inadvertent stick injury.

With this new technique, weakening of the suture is not an issue since the suture is being grasped just behind the needle; a section of the suture, which will never be involved in any knot. This technique has routinely been used in our unit for the past two years without a single event of inadvertent needle-related injury to the operating staff and is recommended for adoption by surgeons in their handling of tissues when the needle is not actually being driven, and when it is being returned to the scrub nurse.

References

1. Tokars JI, Bell DM, Culver DH, Marcus R, Mendelson MH, Sloan EP, Farber BF, Fligner D, Chamberland ME, McKibben PS, et al. Percutaneous injuries during surgical procedures. JAMA 1992 Jun 3; 267(21):2899-904

Author Information

Charles Greenidge, FCCS

Victoria Hospital