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CLINICAL SUMMARY

SUMMARY OF:

INCIDENCE OF MICROPERFORATION FOR SURGICAL GLOVES DEPENDS ON DURATION OF WEAR

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BACKGROUND

The risk of glove perforation has been shown to be dependent upon the length and type of surgery, among other factors. In order to maintain the barrier protection that surgical gloves are intended for, it is recommended that gloves be changed every two to three hours during surgery, however this is not often followed. This study is intended to prove the correlation between duration of glove wear and perforations in order to back up the recommendation that gloves should be changed routinely.

OVERVIEW

All gloves from surgeons and surgical nurses in general surgery were separated into 3 categories based on the duration of wear and examined for perforations. The type of surgery, wearer's role, level of stress on the glove, instruments used, and part of the body operated on were also taken into consideration.

RESULTS

Out of 898 pairs of gloves, 19% (171) had undetected microperforations. The rate of perforations was 15.4% for gloves worn 90 minutes or less, 18.1% for gloves worn 91-150 minutes, and 23.7% for gloves worn longer than 150 minutes. The perforation rate was higher for surgeons (23%) than first assistants (19%) and surgical nurses (20.5%).

CONCLUSION

Routine glove changes, as often as every 90 minutes, will help minimize the risk of undetected microperforations, in turn helping to reduce the risk of microbial transmission. Double gloving can also help reduce the incidence of glove perforations. A major contributing factor to microperforations is the amount of mechanical stress on gloves during a procedure.

References 1. Partecke et al., Incidence of Microperforation for Surgical Gloves Depends on Duration of Wear *Infect Control Hosp Epidemiol* 2009;30:409-414

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**Dr. Assadian has performed paid consulting work for Quantum Management & Service, a paid service provider of Ansell and/or its affiliates.*

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