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RESIDENT'S FORUM

What Should We Use? Recommendations on Appropriate Gloves for Dermatologic Surgery☆

¿Qué tipo de guantes debemos utilizar en la cirugía dermatológica? Recomendaciones sobre los guantes a emplear

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The frequency of surgical site infection (SSI) in dermatologic surgery ranges from 1% to 2.4%.[1] This complication can entail considerable morbidity and must therefore be prevented using cost-effective measures. Since their introduction by William Stewart in 1890, surgical gloves have been used continuously with aim of preventing infections and protecting both patients and health professionals. In recent decades, the use of sterile gloves has become standard practice in the prevention of SSI in dermatologic surgery, despite their greater cost and the lack of evidence on their superiority over nonsterile gloves.

In 2016, Brewer et al.[2] published the results of the first meta-analysis comparing the frequency of SSI with sterile and nonsterile gloves in dermatologic surgery. The procedures covered were Mohs micrographic surgery, repair of lacerations, standard excisions, and tooth extractions. The analysis included 13 studies with 11071 patients, of whom 2741 had participated in randomized clinical trials with sterile gloves (n = 1360) or nonsterile glove (n = 1381) and 8330 were from observational studies with sterile gloves (n = 4680) or nonsterile gloves (n = 3650). SSI was detected in 2.1% (107/5031) of individuals operated on by surgeons using nonsterile gloves compared with 2.0% (121/6040) whose surgeon wore sterile gloves. Therefore, no significant differences were observed between both types of glove (RR, 1.06; 95% CI, 0.81-1.39).

A specific analysis of patients who underwent Mohs micrographic surgery (n = 4899) revealed similar results (RR, 1.15; 95% CI, 0.68-1.97). Sterile gloves were used in 2139 patients and nonsterile gloves in 2760. SSI was detected in 23 cases (1.07%) and 35 cases (1.27%), respectively, with no significant differences between the groups (RR, 1.15; 95% CI, 0.68-1.97). The meta-analysis excluded a prospective study of Mohs micrographic surgery (n = 1204) with nonsterile

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gloves because there was no control group. In the study, 11 cases of SSI (0.9%) were reported. When these patients were included in the total cohort of the meta-analysis, the frequency of SSI with nonsterile gloves fell to only 1.9% (vs 2.0% with sterile gloves).[2]

Since January 2017, the United States Food and Drug Administration (FDA) has banned the use of powdered gloves of any type, whether sterile or not. This is the second time in history that the FDA has prohibited the use of a medical device. Their decision was based on the numerous adverse reactions caused by the gloves, namely, allergic and/or inflammatory respiratory conditions, inflammation of the surgical site, formation of foreign body granulomas, and postsurgical adhesions.[3] Prevention of these adverse effects would save approximately $30 million per year in the USA.[4] As an alternative, powder-free nitrile or neoprene gloves provide a similar level of protection as powdered gloves with an acceptable degree of comfort.[5,6]

Cost-effective measures that do not compromise the safety of patients or health professionals must be used to ensure the sustainability of the health system. In the light of new evidence, it seems reasonable to recommend the use of nonsterile and powder-free gloves in dermatologic surgery.

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