Double-gloving

The practice of wearing two pairs of surgical gloves, one over the other, during procedures—especially in high-risk surgeries—to provide additional protection against contamination and needlestick injuries.

Benefits

Reduces risk of surgical site infections (SSI) by lowering glove perforation-related contamination.

Protects healthcare workers from bloodborne pathogens (e.g. HIV, HBV, HCV).

Allows detection of inner glove breaches when using indicator gloves (colored inner layer).

⚠ Barriers to adoption (despite evidence):

Perceived loss of tactile sensitivity

Habitual single-glove practices

Lack of awareness or institutional protocols

Clinical guidelines:

WHO, CDC, and multiple surgical societies recommend double-gloving in most major surgeries, particularly:

Neurosurgery

Orthopedic/trauma

General surgery

Obstetric/gynecological procedures

Double gloving is the practice of wearing two layers of medical gloves to reduce the danger of infection from glove failure or penetration of the gloves by sharp objects during medical procedures. A systematic review of the literature has shown double gloving to offer significantly more protection against inner glove perforation in surgical procedures compared to the use of a single glove layer [1) 2)].

Bashir and Sørensen suggested that surgical gloves could be a possible means for transferring microorganisms from skin flora to shunt material during surgery.

A retrospective study of 432 shunt operations in 295 adults was undertaken over a 7-year period. Study population consisted of two groups: Group A without intraoperative glove change (2003-2006),

and Group B with change of the outer pair of the initial double gloves before handling the shunt material (2006-2009). The results were compared at 6- and 12-month postoperatively. A binary logistic regression was performed to determine predictors of shunt infections.

Overall, 46 (10.6%) infection episodes occurred in 40 (13.6%) patients. Main symptoms were fever, abdominal pain and altered mental status. Propionibacterium acnes was the frequently isolated microorganism, followed by Staphylococcus species. The infection rate was reduced only moderately from 11.8% in Group A to 9.8% in Group B (p = .472). Patients with subarachnoid haemorrhage were more likely to experience shunt infections (17.9%), compared to patients with normal pressure hydrocephalus (5.9%). An increased likelihood of shunt infections for the increased number of subsequent shunt revisions (p = .030) and a trend towards prior history of shunt infections (p = .118) was seen. After adjusting for various covariates, a decreased likelihood of shunt infections for intraoperative glove change was seen at 6-month follow-up for first-time shunt insertion (p = .050).

Intraoperative glove change does not significantly reduce the risk of shunt infection. However, it seems to reduce the infection rate within 6 months in patients undergoing first-time shunt insertion only [3].

Double gloving is the practice of wearing two layers of medical gloves to reduce the danger of infection from glove failure or penetration of the gloves by sharp objects during medical procedures. A systematic review of the literature has shown double gloving to offer significantly more protection against inner glove perforation in surgical procedures compared to the use of a single glove layer [4]

Double-gloving is the practice of wearing two layers of medical gloves to reduce the danger of infection from glove failure or penetration of the gloves by sharp objects during medical procedures. A systematic review of the literature has shown double gloving to offer significantly more protection against inner glove perforation in surgical procedures compared to the use of a single glove layer [5] [6].

[1], [4], [5]
Tanner, J; Parkinson, H (2002). “Double gloving to reduce surgical cross-infection”. The Cochrane Library (3): CD003087. doi:10.1002/14651858.CD003087. PMID 12137673.
[2], [6]
Tanner, J; Parkinson, H (2006). “Double gloving to reduce surgical cross-infection”. The Cochrane Library (3): CD003087. doi:10.1002/14651858.CD003087.pub2
[3]
Bashir A, Sørensen P. Evaluation of intraoperative glove change in prevention of postoperative cerebrospinal fluid shunt infections, and the predictors of shunt infection. Br J Neurosurg. 2016 Sep 14:1-7. [Epub ahead of print] PubMed PMID: 27626705.