duct and machine-assisted disinfection using hot water (170°F for 30 minutes). Both types of machines had a wash cycle built into the process, followed by the disinfection cycle. The chemically-assisted machine also had a rinse cycle. Our study differed from previously published studies in that we inoculated the tubing with a known inoculum of Pseudomonas species and Acinetobacter species. We found that in our study the machine-assisted chemical disinfection was more efficient in killing the organism we had introduced than the hot water disinfection alone.

Our study will be published shortly in the *Journal of Hospital Infection* (British).

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Sterilization of Surgical Instruments

To the Editor:

A question regarding proper sterilization of surgical instruments has arisen for us, and we are hoping you may be able to help us with the solution. For some time we have been aware that instruments must be left unclamped and open in surgical packs to enable the autoclave steam to penetrate to all surfaces in order to assure sterility.

The surgery crew is afraid to do this with sharp instruments such as towel clips and tenaculums, however, because of the danger to the staff in opening the packs. Most of the staff claim they have had unfortunate accidents of this nature in the past. We know that hooking them into a towel is not a suitable solution because of the potential problems with "holy" surgical linen.

We are hoping you have encountered dilemmas such as this before and can "shed some light" on our problem.

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The preceding letter was referred to Carole Van Antwerpen, R.N., and Peter A. Gross, M.D., for a reply.

Safe packaging for sterilization is a common problem with sharp instruments such as towel clips and tenaculums.

In our operating room, after the cleaning process towel clips and tenaculums are autoclaved in baskets in the unlocked position. We define unlocked as keeping the edges touching while the instrument is not locked completely. In this position you can imagine that the tips of the towel clips or tenaculums are just touching or are slightly separated. The use of this technique has virtually eliminated unfortunate accidents.

In our central sterile processing area towel clips and tenaculums are usually packaged in procedure trays or heat-sealed pouches. Again the unlocked position rather than the completely open position is preferred. For the trays, a towel is placed over the sharp objects to prevent unnecessary puncture wounds when opening the trays. For the peel-back pouches, a square piece of gauze (3x3 or 4x4) is placed over the sharp points. This method will prevent the tips from piercing the pouch. So this method will not only keep the instrument sterile while it is in the pouch but, also prevent puncture wounds when the instrument is being removed from the pouch. Whatever preventive measures are used, in-service education on a continuing basis is necessary to minimize the hazards of sharp instruments for the staff.

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