

shown it is the nitrous oxide in the anesthetic gas mixture that is responsible for distending the blister formed between the layers of latex.

I have been aware of the maker's concern with these problems for some time. In an earlier catalog, one is advised that "Ethylene oxide is unsatisfactory for the sterilization of multiple-dipped instruments such as spiral latex endotracheal tubes since the gas may permeate the material under pressure and cause blistering or separation of the layers."

Finally (with FDA approval), the maker felt it necessary to send to all Directors of Departments of Anesthesiology in the 8500 hospitals in the USA a Hazard Alert stating that:

SPIRAL LATEX ENDOTRACHEAL TUBES (ANODE TUBES) which have been ethylene oxide gas sterilized or steam sterilized with a vacuum applied in the sterilization cycle could present a life-threatening hazard to the patient.

ANY TUBES SO STERILIZED SHOULD NEVER BE REUSED.

The latex layers can separate under vacuum. These separations, should they occur, *are usually invisible*.

The life-endangering hazard occurs during anesthesia. Anesthetic gases, especially nitrous oxide, may permeate into the layer separations, resulting in expansion which can totally occlude the inner lumen of the tube.

****DO NOT GAS STERILIZE****

****DO NOT STEAM STERILIZE WITH VACUUM****

Recommendations for Proper Sterilization:

1. STEAM STERILIZE WITH LIQUID CYCLE PROGRAM *WITHOUT VACUUM*, or
2. COLD STERILIZE, RINSE THOROUGHLY.

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Sixteen-gauge Tuohy Needles Should Be Abandoned

To the Editor:—It is astounding to me that in 1980, 16-gauge Tuohy needles are still being used for placement of plastic tubing in either the epidural or the subarachnoid space.¹

For many years, an 18-gauge thin-walled Tuohy needle, which will accommodate most plastic tubing, has been available.* Whether an 18-gauge as compared with a 16-gauge needle would reduce the incidence of headache is debatable. Nonetheless, the authors of the cited article state, "There appears to be a direct correlation between the size of the needle used for the puncture and the incidence of cephalgia."

Therefore, why use a 16-gauge Tuohy needle when

At the end of a commonly used autoclave cycle the pressure changes rapidly from +27–30 pounds per square inch to –10 pounds per square inch as vacuum is applied to remove the steam and moisture from the load. In the liquid cycle the pressure is gradually reduced down to atmospheric without the application of vacuum.

It is possible that this warning and advice have been forgotten in the intervening three years. However, these two new reports of the same hazard would indicate that we should urgently review our handling of these tubes to eliminate this unnecessary hazard to our patients.

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an 18-gauge thin-walled Tuohy needle permits plastic tubing to be threaded through it into either the subarachnoid or the epidural space. Such practice should cease.

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* Becton-Dickinson, Rutherford, New Jersey 07070, Order No. 1284.