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### Pyrogenic Reactions Following Cardiac Catheterization

Gina Pugliese, RN, MS  
Martin S. Favero, PhD

Dr. Susan Cookson, of the CDC, and co-investigators recently reported an outbreak of pyrogenic reactions among 12 patients with 2 deaths, following cardiac catheterization associated with improper cleaning procedures used on cardiac catheters prior to sterilization.

A case-control study conducted on 12 case patients and 40 randomly selected control patients revealed no

specific catheter was associated with case patients; however, exposure to intracoronary nitroglycerin (NTG) was associated significantly with the cases. A review of the procedures revealed that NTG or indocyanine green dye was poured into glass medicine cups that previously had been washed in an enzyme cleaner and then sterilized. The enzyme cleaner, used for an entire day, had elevated levels of gram-negative bacteria ( $> 10^4$  colony-forming units/ml) and endotoxin (434 endotoxin units [EU]/mL). The reprocessed cups had no live bacteria,

but had elevated endotoxin levels (median, 2,250 EU).

The authors concluded that exposure to contaminated glass medicine cups probably resulted in pyrogenic reactions and contributed to the deaths of two critically ill patients.

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