Journal of Andrology, Vol 14, Issue 1 66-69, Copyright © 1993 by The American Society of Andrology

JOURNAL ARTICLE

Effect of catheter composition on sperm quality

N. S. Davis, S. A. Rothmann, M. Tan and A. J. Thomas Jr
Cleveland Clinic Foundation, Ohio.

Bladder catheterization for collection of retrograde ejaculates is commonly practiced, although previous studies have shown that materials used in the manufacture of the catheters may be toxic to sperm. Potential toxicity is particularly relevant to electroejaculation, as sperm from anejaculatory individuals undergoing this procedure characteristically exhibit poor motility and viability. To determine the effect of short-term exposure to various catheter materials on sperm quality, donor semen was diluted with BWW medium and aliquots incubated for 1 and 5 minutes with segments of four different catheters. The catheters were composed of latex, silicone rubber, polytetrafluoroethylene (Teflon), and radio-opaque Teflon, respectively. Following incubation, eosin-nigrosin staining for viability was performed and sperm motility assessed using computer-assisted sperm analysis (Cellsoft, Cryo Resources, Ltd). In the second phase of the study, donor semen was incubated with catheter segments coated with 0.3 ml of a water-soluble, nontoxic lubricant (Cellulosagel, Lederle) to evaluate whether the combination adversely affects sperm. Percent motility and viability for the semen specimens incubated with the four catheters alone did not differ significantly from control values either at 1 or at 5 minutes (P = 0.3, motility; P = 0.6, viability). The addition of lubricant did not change the catheter data significantly, indicating the absence of independent or synergistic toxicity (P = 0.5, motility; P = 0.4, viability). This study provides substantial evidence that brief exposure to conventional catheters, with or without a nontoxic lubricant, does not adversely affect sperm motility or viability. (ABSTRACT TRUNCATED AT 250 WORDS)