Sheathing of the Endovaginal Ultrasound Probe: Is It Adequate?

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The purpose of this prospective investigation was to compare two methods for sheathing of the endovaginal ultrasound probe. The study was conducted over a 7-month period in 1991 to 1992. In the first half of the investigation, latex examination gloves were used to sheath the endovaginal probe, during the second half of the investigation, latex condoms were used. After the ultrasound examination, the probes were inspected for gross contamination by the ultrasonographer. The sheaths were then tested for perforations by filling them with water to twice their usual volume and observing for leaks. Fifty unused gloves and condoms were similarly tested to determine the prevalence of preexisting defects. One hundred twenty-eight gloves and 102 condoms from patients were tested.

Four of the 128 used gloves (3.1% per cent) had perforations. Seven of 102 used condoms (6.9% per cent) had perforations. This difference is not statistically significant (P = .16).

When the probe was covered by a glove, one instance of visible contamination occurred (0.78% per cent). In this case, there was no perforation in the glove, and contamination of the shaft of the probe apparently resulted from leakage of fluid around the cuff of the glove because of slippage of the glove during examination. When a condom was used to cover the probe, eight cases of obvious contamination occurred (7.8% per cent). In six of these cases, the visible contamination coincided with the site of perforation in the condom. In two additional cases, there was no perforation in the condom, and leakage occurred around the open end of the condom onto the shaft of the probe. In one other instance in which a small perforation was present in the condom, no visible contamination was evident. The observed difference in frequency of visible contamination was highly significant (P < .007). There was no clustering of perforations or contamination in specimens submitted by any single sonographer.

The prevalence of defects in unused gloves was 2% per cent, which is not significantly different from observed prevalence in used gloves. There were no preexisting defects in unused condoms compared with 6.9% per cent in used condoms (P = .057).

(In this study, about 3% per cent of the gloves and 7% per cent of the condoms used to sheath the transvaginal ultrasound probe showed evidence of perforation. In other cases there was visible contamination, usually when a condom was used. Although there are disposable sheaths made specifically for the vaginal ultrasound probe, they are more expensive and probably no more convenient than the gloves or condoms used in this study. The risk of perforation or leakage with these ultrasound probe covers needs to be investigated.

How great is the risk of transmitting infection via the transvaginal ultrasound probe? Such infections must be extremely rare—I can find no such reports in the literature and several well-known sonographers could not think of any cases they had heard about. Nevertheless, in today's world it seems prudent to use careful technique to avoid the risk of transmitting infection from patient to patient. The ultrasound technicians should wear gloves and the probes should probably be covered with some disposable sheath. In addition, the probe should be wiped clean and disinfected with some commercially available solution. Such solutions should be an EPA-approved "sterilant/disinfectant" which is capable of destroying human immunodeficiency virus. Wipes saturated with such solutions are commercially available.

Ultrasound probes and vaginal specula are classified as "semicritical" because they contact, but do not penetrate vaginal epithelium. Biopsy forceps and other instruments that penetrate tissues are classified as "critical" because they have a higher risk potential for transmitting infection. However, both "critical" and "semicritical" instruments should be sterilized between patients. Autoclaving is recommended, but this may dull the cutting edge on biopsy forceps and gas or liquid...
sterilization (soaking) may be best for these instruments (MMWR 1993;42(RR-8):May 28, p. 6). The manufacturers' instructions should be carefully followed.—HWJ,III

Malignant Melanoma of the Vulva and Vagina: Trends in Incidence, Age Distribution, and Long-Term Survival Among 245 Consecutive Cases in Sweden, 1960–1984

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The current article is part of an investigation of melanoma in regions not exposed to ultraviolet radiation, such as cutaneous and mucosal melanoma in the female and male genitalia and mucosal melanoma in the gastrointestinal tract and head and neck region. In this article, the authors report on trends in incidence, age distribution, and long-term survival in a series of melanomas of the vulva and vagina of 245 women during 1960 through 1984. The series was a consecutive one and comprised the actual time period.

During 1960 through 1984, 245 cases of melanoma of the vulva and vagina were diagnosed in Sweden and registered in the National Cancer Registry. In 219 patients the primary tumors occurred in the vulva, and in 26 patients the tumors occurred in the vagina. Most patients with melanoma of the vulva, 165 of 219 (75 per cent), were older than 60 years of age. The same was true for tumors located exclusively in the vagina (19 of the 26 patients [73 per cent] were older than 60 years of age at the time of diagnosis).

The mean age of the patients with a primary vulvar melanoma was 67.7 years (range, 18–91). The mean age increased slightly over the actual 25 years. The mean age of the patients with a primary vaginal melanoma was 66.3 years (range, 36–87), and there was also a tendency toward an increasing age at diagnosis.

The age-standardized incidence of vulvar melanoma decreased continuously from 0.27 per 100,000 women during 1960 to 1964 to 0.14 per 100,000 women in 1980 to 1984, an annual decrease of 3.2 per cent. The number of patients with vaginal melanoma was too small for similar analysis.

The mean age-specific annual incidence of vulvar melanoma increased continuously by increasing age. During 1960 to 1984, the age-specific incidence was almost stationary among the oldest women, whereas there was a tendency toward a decrease in incidence among women younger than 75 years of age after 1965. A similar trend was observed among women with melanoma in the vagina, but again, the number of such patients was too small (26 patients) to allow any conclusions to be drawn.

The observed survival rate of patients with a vulvar melanoma was 35 per cent after 5 years of observation and 23 per cent after 10 years of observation. Relative survival rates of 47 per cent and 44 per cent, respectively, were obtained. For patients with a vaginal melanoma, the observed rate was 13 per cent, and the relative survival rate was 18 per cent after 5 years of observation.

(Melanoma of the vulva is the second most common of all vulvar malignancies despite its rarity. This study is the largest population-based series ever published and includes virtually all cases diagnosed in Sweden during a 25-year period. In contrast to other cutaneous melanomas in Sweden, which have increased about 6 per cent per year, there was no increase in the incidence of vulvar and vaginal melanoma. Because of the difficulty of diagnosing melanoma...