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SMFM Statement

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Ultraviolet C device for disinfection of transvaginal ultrasound probes

An Update to SMFM Special Statement:
Reducing the risk of transmitting infection by transvaginal ultrasound examination.
Am J Obstet Gynecol 2020; 223(3): B2-6.

In our above-captioned review of procedures for disinfecting ultrasound probes, we noted that an ultraviolet C (UVC) chamber device is approved by the US Food and Drug Administration (FDA) for low-level disinfection. We concluded that this device alone is not sufficient for disinfection of vaginal ultrasound probes because endocavitary probes require high-level disinfection.

A manufacturer (Germitec, Ivry-sur-Seine, France) contacted us and provided documentation that their UVC chamber device (Antigermix-E, Hypernova Chronos) is licensed in France, Canada, and Australia for high-level disinfection of ultrasound probes. They also provided a synopsis of test results from a reference laboratory showing a 4 $\log_{10}$ reduction (10,000-fold) of a variety of viral pathogens including HPV and at least 5 $\log_{10}$ reduction (100,000-fold) of bacteria, fungi, and spores. Thus, this system can be considered for high-level disinfection in those countries where it is licensed. Germitec informed us that an application has been made for FDA-approval of the device for high-level disinfection in the US, but approval has not been granted as of this writing.

The antimicrobial efficacy of UVC depends on the total energy of exposure, which depends in turn on wavelength, intensity of the source, distance from the source, and duration. For a chamber device, only duration is under user control. When using a UVC device for disinfection, it is critical to first properly clean the probe and then strictly follow the manufacturer's instructions regarding duration of exposure and other aspects of disinfection.

The authors declare no conflicts of interest.

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