Perineal Use of Cosmetic Talc as a Risk Factor for Ovarian Cancer: A Weight-of-Evidence Evaluation.

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Abstract: This analysis reviews the published in vitro, in vivo, and epidemiological studies and other information relevant to the question of whether perineal use of cosmetic talc might be a risk factor for ovarian cancer. The evidence to date indicates that there is no difference in talc levels measured in the ovaries of women who use cosmetic talc perineally vs. those who do not. This is consistent with the fact that numerous animal studies have shown that direct injection of very high talc doses into the female reproductive tract of rodents, rabbits, and primates does not result in detectable levels of talc in the ovary. It is clear that the analytical methods used in many of the studies seeking to identify talc in ovarian tissues cannot distinguish between talc vs other common magnesium silicates found in the environment as well as food and consumer products. Numerous in vitro and animal in vivo studies indicate that cosmetic talc is not genotoxic. One in vitro study suggested that very high levels of cosmetic talc might increase colony formation in human ovarian cell cultures through a non-genotoxic mechanism, but methodological shortcomings of that study raise questions regarding the relevance of the findings. Animal studies have demonstrated that administration of high talc doses to the reproductive tract, including direct injection into the ovaries themselves, does not result in ovarian tumor formation and no animal study to date has reported an increase in ovarian tumors following cosmetic talc administration via any exposure pathway. Some case-control epidemiology studies have reported an association between perineal talc use and ovarian cancer, but these studies may be confounded by recall bias and other factors. Cohort studies, which are not similarly confounded, do not show any such association. We conclude that, based on the current weight of scientific evidence, perineal use of cosmetic talc is not a risk factor for ovarian cancer.