COMMENTARY

Guest Family Physician Commentaries

Kenyatta Lee, MD

Interference Potential of Personal Lubricants and Vaginal Medications on ThinPrep® Tests

Corporate outsourcing and a sluggish economy have made it increasingly difficult for our patients to earn a living and provide for their families. Rejected Papanicolaou smears create a source of stress for the patient and her family, but it also means that, in some cases, she has to miss work and lose yet another day's wage. The study by Feit and Mowry[1] evaluates the effects of the 2 most common over-the-counter vaginal lubricants (KY Warming Liquid [Johnson & Johnson, New Brunswick, NJ] and Replens [KoRa Health Care, Swords, Ireland]) and one yeast cream (Monistat 7, McNeill-PPC, Inc., Skillman, NJ) for interference on the ThinPrep Papanicolaou test. The ThinPrep Papanicolaou test was chosen because more than 70% of the Papanicolaou tests done in the United States are ThinPrep tests, manufactured by Hologic, Inc. (Bedford, MA).[2]

The general premise is that the lubricants affect cellularity, or the number of cells transferred to the glass slide from the ThinPrep Papanicolaou test vial during processing. The authors suggest that the samples containing these substances clog the semipermeable membrane of the filter, thereby blocking the transfer of cells to the glass slide.[1] The impact of the gels on cellularity was evaluated by comparing samples that were not contaminated with lubricants with samples that were contaminated with varying concentrations of lubricants.

Replens had what was described as a "drastic effect on the specimen cellularity at even the lowest volume."[1] Monistat 7 also had a significant decrease in cellularity when compared with controls, although the reduction in cellularity decreased step-wise as the concentration increased from 20 μL to 500 μL. Analysis of variance comparison using the Tukey honestly significant difference test determined that the KY Warming Liquid specimens did not differ significantly from controls. These results surprised me a bit; however, I agree with the authors' suggestion that the results may have been different if the samples were obtained in vivo.

One of the many benefits of working in a patient-centered medical home model is the ability to translate great evidenced-based recommendations into clinical practice with relative ease. Consequently, after reading this article, our practice developed a policy that requires the medical assistants to contact patients who will be receiving a Papanicolaou 1 week before the appointment to discourage the use of lubricants. We also developed a Clinical Decision Support template to be used by our medical assistants, which prompts them to ask each patient whether they have used the lubricant, gels, or antifungals that are known to interfere with the ThinPrep test *before* the Papanicolaou test is performed. These interventions are likely to decrease the number of patients who have to take time out of their day to received a repeat Papanicolaou test.

Knuckle Cracking and Hand Osteoarthritis

This is "medical myth busting" at its best. Generations of concerned family members have put physicians on the hot seat with the exhortation that we should tell the patient that "they should stop cracking their knuckles because it leads to arthritis." The article by DeWeber et al[3] begins with a plausible mechanism by which osteoarthritis (OA) could develop secondary to knuckle cracking (KC); frankly, it sounds like an explanation that many of us would give to our more inquisitive patients. It explains cracking as a joint space distraction, causing larger bubbles of air to suddenly collapse into numerous microscopic bubbles, leading to the characteristic cracking sound.[3] The authors also cite an in vitro

This article was externally peer reviewed.
From University of Florida College of Medicine, Jacksonville, FL.
Funding: none.
Conflict of interest: none declared.
Corresponding author: Kenyatta Y. Lee, MD, University of Florida College of Medicine (E-mail: kenyatta.lee@jax.ufl.edu).

study that suggests that the force required to crack a knuckle exceeds the energy threshold that can lead to articular damage.[4]

The study by DeWeber et al[3] was designed as a retrospective, nested, case-control study examining KC behavior among a population aged 50 to 89 years. Participants were selected from patients who had received radiographs of the right hand within the previous 5 years. The experimental group consisted of patients who had OA that was diagnosed by radiograph; the control group consisted of patients without OA, also diagnosed with radiographs.

The study produced 2 important conclusions. The first was that the duration of KC has no correlation with the presence of OA in the distal interphalangeal, the proximal interphalangeal, or the metacarpophalangeal joints. The second conclusion was reached using an interesting term called "crack-years" (a rough quantification of the total amount of exposure), which allowed DeWeber et al[3] to examine the "dose–response" relationship between KC and OA. Again, no significant correlation between KC and OA was detected. So, although KC may be annoying to spouses and parents, physicians can now council their patients with confidence that there is no evidence to suggest that KC will cause OA. This medical myth as has finally been busted!

Performance on the American Board of Family Medicine Certification Examination: Are Superior Test Taking Skills Alone Sufficient to Pass?

Soon I will be taking the Family Medicine Certification Examination, and as I read this article I kept thinking, "it's time to start studying!" O'Neill et al[5] evaluated whether it was test-taking skills or physician ability that determined a passing score on the ABFM board certification examination. The study was designed using 4 nonphysicians who are considered experts in the field of certification and licensure testing. The group completed the Summer 2009 ABFM board certification examination. Though the minimum passing threshold for the 2009 certification examination corresponded to 57.7% to 61.0% of questions answered correctly, the study participants' percent of correct answers ranged from 24.0% to 35.1% (mean, 29.2%; SD, 0.5%).[5] To put this into perspective, 10,818 candidates completed the ABFM's board certification examination in the summer of 2009. Approximately 86% passed the examination, and scores lower than 200 (not in the range for measurement) are reported as 200. During the 2009 examinations only 8 physicians scored below a 200, approximately 0.0004% to 0.0007% of the examinee population. However, in the study by O'Neill et al, none of the participants were able to score within the reportable range of the scale (score of 200).

The study concluded that, although all the participants seem to have performed better than chance would predict, the results affirm the notion that the ABFM board examination is not predominantly a measure of generic test-taking ability and clearly requires medical training to pass. As my father is fond of saying, "failing to plan is like planning to fail." So, if you are planning to pass the ABFM's board certification examination, you had better start studying, because great test-taking skills are just not enough.

References

1. Feit TD, Mowry DA. Interference potential of personal lubricants and vaginal medications on ThinPrep Pap tests. J Am Board Fam Pract 2011;24:181–186.
2. Dobosz J. Cytyc: testing positive for growth. Available from: http://www.forbes.com/2005/03/30/cz_jd_0330gurusow_inl.html. Accessed March 19, 2009.
3. DeWeber K, Olszewski M, Ortolano R. Knuckle cracking and hand osteoarthritis. J Am Board Fam Pract 2011;24:169–174.
4. Watson P, Kernohan WG, Mollan RA. A study of the cracking sounds from the metacarpophalangeal joint. Proc Inst Mech Eng 1989;203:109-18.
5. O'Neill TR, Royal KD, Puffer JC. Performance on the American Board of Family Medicine certification examination: are superior test-taking skills alone sufficient to pass? J Am Board Fam Pract 2011;24:175–180.