Universal Hepatitis C Screening and Surgeon Safety

I read with interest the article "Risk of Hepatitis C Virus Exposure in Orthopedic Surgery: Is Universal Screening Needed?" by Dr. DelSole and colleagues (*Am J Orthop.* 2014;43(6):E117-E123). The authors make a compelling case for universal hepatitis C screening, and I agree that this program may have significant benefits, including risk stratification for elective surgery and identification of patients for antiviral treatment. However, based largely on personal experiences, I disagree that preoperative knowledge of the patient's seropositive status will improve surgeon safety.

The authors list a number of interventions to decrease the risk of exposure, such as the use of Kevlar gloves, double gloving, eye protection, and others. However, perhaps the largest barrier to their use is their perceived inconvenience. Surgeons often cite decreased dexterity and sensation in their opposition to double or thick gloves, for instance. My concern is that with the advent of universal screening, many surgeons will abandon their universal approach and only wear Kevlar or double gloves on infected cases.

I have observed first-hand such a policy this year, when I spent 3 months in orthopedic centers in Russia. In Russia, all patients undergo routine preoperative testing for both hepatitis C virus and human immunodeficiency virus (HIV). While the policy of standard precautions exists, the majority of surgeons used single gloves and did not use eye protection for most cases, but took additional measures when operating on seropositive patients. Paradoxically, I witnessed numerous needle sticks during those cases, precisely because the surgeons and staff were not comfortable with wearing double gloves or hands-free passing of sharp instruments. Even goggles often ended up being removed during the cases, because the surgeons were not accustomed to using them.

Like any surgical skill, standard precautions require repetition and practice. Therefore, I am concerned that with adoption of universal screening in the United States, we will become complacent and accustomed to unsafe practices, which may paradoxically increase the risk of operating on infected patients.

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Author's Disclosure Statement: The author reports no actual or potential conflict of interest in relation to this letter.

Author's Response

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We appreciate the response of the reader. This is indeed an interesting paradox—that an effort to improve safety in the operating room might yield the opposite effect owing to a heightened sense of protection, which induces a laxity in adhering to standard precautions. This possibility does create a real concern for the safety of the surgical team. Although we do recommend preoperative screening for hepatitis C virus (HCV), our intent was not in any way to diminish the need for adhering to standard precautions.

The foundation of standard precautions rests upon the universal assumption of infectivity of blood exposures—this is why the precautions are "standard" and should be adhered to during all operative procedures.

First and foremost, identification of patients with hepatitis C infection offers the chance for referral for care, which in many cases is curative thanks to recent advances in hepatitis C therapy. Whether or not the patient accepts the referral for hepatitis C treatment should not, as we emphasize in our paper, affect the plan for surgery.

Secondly, a negative preoperative test should in no way alter normal intraoperative safety practices. The test results could be falsely negative due to human or mechanical error. In addition, the patient could have other transmissible diseases such as HIV, hepatitis B, or other less common yet transmissible viral infections. Importantly, given the historical narratives of the HIV and HCV epidemics, we as surgeons hold the responsibility to never be complacent about the next "unknown" novel viral agent that has yet to reveal itself.

Thirdly, perceived inconvenience of protective equipment is largely a matter of training. At our institution residents infrequently wear single layers of gloves, masks without eye protection, body suits for arthroplasty, lead vests without thyroid shields, etc. We suspect similar practice occurs at other teaching hospitals as well. As today's residents learn the craft in an environment of heightened protection, it is our hope that they will carry these good habits into their own practice as orthopedic surgeons and that patient outcomes will not differ.

The goal of screening is to create an improved environment of safety and health awareness for the patient and the surgical team, the foundation of which is standard precautions in the operating room. We advocate strongly that standard precautions continue to be the basis of intraoperative safety and that they be used for all patients indiscriminately.

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