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Commentary

Reusing surgical instruments during Mohs micrographic surgery: safe from infection, but not free from risk

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Abstract

We report several scenarios of compromise in patient safety owing to the re-use of mis-assigned patient's surgical instruments in Mohs micrographic surgery.

We discuss the breaks in universal protocols that others may experience in their practices and describe corrective measures that our institutions employed to avoid such future events.

There is a lack of publication in the literature on the topic of mis-assigned instrument use in Mohs surgery. We believe that the practice of re-using instruments is cost-effective and therefore common. Based on our humbling experience, this publication may initiate important discussion among dermatologist regarding safety protocols at their respective institutions.

Keywords: Mohs micrographic surgery, dermatologic surgery, mis-assigned patient surgery, medical error

Introduction

Mohs micrographic surgery (MMS) is a unique surgical technique during which several patients are often undergoing surgery simultaneously. In order to improve efficiency, patients are sometimes waiting for pathological processing while others are progressing through surgical stages or final reconstruction. As such, patients and surgical instrument trays are often moving in and out of rooms and verification of the correct patient and instrument set is paramount.

The reuse of surgical instruments for additional Mohs layers is a common cost efficiency practice. Though, a recent investigation concluded that surgical site infections were within acceptable rates for cutaneous surgery when the same surgical tray was used for both tumor extirpation and repair, the greatest risk of this practice is not the acquisition of infection, but inadvertently operating with mis-assigned patient's blood contaminated instruments [1]. Despite the use of safety protocols to prevent mis-assigned

instrument use, in 2008 33% of 98 surveyed members of the American College of Mohs Surgery acknowledged to accidentally using an incorrect set of instruments on a patient [2].

We report three incidents in which mis-assigned instrument use occurred at two different institutions and strategies that were used to reduce or eliminate this hazard. The first two events occurred at a University outpatient clinic. The safety protocol prior to the first event required that each tray be labeled with the patient's name, necessitating the nurse to verify the identity verbally with the patient before opening the tray. During the first event, a nurse did not utilize the pre-procedure protocol and the mis-assigned instrument tray was used during a patient's procedure. Given the gravity of the event, the protocol was subsequently strengthened to include patient identity wristbands that were color-coded to match the same identity label on the tray. Between Mohs layers and the reconstruction, the nurse and the surgeon were to independently verify that the patient's identity matched the tray. Additionally, patients remained in the same operating rooms as their trays and the rooms not changed throughout the day.

The second incident of mis-assigned instrument surgery at our institution occurred when a patient's tray was temporarily moved into the hallway and then accidentally pulled by a nurse into the adjacent room without re-verification. After the second event, our institution converted from reusing surgical trays to opening a new set of instruments for each layer and repair performed.

Notably, in both incidents of mis-assigned instrument surgery, the error was noted and reported by third party nursing personnel not directly involved in each patient's surgical care, raising the question of how many such instances may have gone undetected or unreported in the past.

Another event occurred at an unaffiliated outpatient facility. The surgeon had relied on his medical assistant for confirming the patient's identity prior to a repair and discovered during the procedure that the instruments were contaminated with another patient's fluids. The verification protocol was then amended so that an instrument "time-out" would be taken verbally and visually with the surgeon, the nurse, and the patient to match the patient's name and color-coded labels on to the correct instruments.

The surgical events occurring with mis-assigned instrument were disclosed to each of the patients involved and they had to undergo the additional burden of serologic testing for transmittable infectious diseases. Fortunately, no such diseases were detected, but significant patient anxiety occurred and patient trust was compromised. Additionally, one event resulted in legal proceedings against one of the healthcare organizations.

Although the risk of mis-assigned instrument use is seldom discussed, similar to incorrect site surgery prevention, appropriate safety protocols that either eliminate the risk through the use of new instruments or reduce the risk through group verification deserve consideration.

References

1. Nasseri E. Prospective Study of Wound Infections in Mohs Micrographic Surgery Using a Single Set of Instruments. Dermatol Surg 2015;41:1008-12.
2. Butler ST, Youker SR, Oliver D, Fosko SW. Patient Safety Practices in Mohs Surgery. Presented at Mohs College 40th Annual Meeting, Vancouver, Canada. May 1-4, 2008.