The emboldened medical student: Ethical dilemmas in a university clinic

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CASE SCENARIO

Fourth-year medical student Overconfident (O) is rotating on a dermatology clerkship. While O is performing a full-body skin examination on a new patient, he notices multiple lesions that he believes would benefit from cryotherapy. After obtaining informed consent from the patient about cryotherapy, the student freezes several lesions. When the attending physician (Dr AP) later comes to see the patient with O, she observes that the student has frozen not only several seborrheic keratoses but also an atypical nevus with irregular borders and variegated pigmentation. However, the cryotherapy has made it difficult to appropriately evaluate the lesion without a biopsy.

Dr AP should:

A. Reprimand the student in front of the patient for freezing lesions without permission and compromising patient care.
B. Make no mention of the worrisome features of the lesion, but encourage the patient to return to the clinic in 2 weeks for re-evaluation.
C. Tell the patient that a biopsy of the lesion is necessary immediately.
D. Tell the patient that cryotherapy has made appropriate evaluation of the lesion difficult clinically and that a biopsy is indicated.

DISCUSSION

This case highlights ethical considerations that arise when working with medical trainees, as well as principles of informed consent.

Medical students play many roles while rotating through clinical clerkships. It is often beneficial to allow medical students the opportunity to interview patients independently and present their findings to a physician, as this exercise aids the supervisor in evaluating the student's clinical skills.[1] Dermatologists should especially take advantage of opportunities to review full-body skin examination techniques, as 1 study involving standardized patients found that medical students performing skin examinations were likely to miss lesions concerning for melanoma.[2]

However, with the exception of emergency care, medical students should avoid conducting therapeutic interventions without first consulting with the supervising physician. This stems from the ethical principle of nonmaleficence; because medical students are not licensed health care providers and are inexperienced, one must assume that they do not have the appropriate knowledge and skills to independently care for patients and may inadvertently cause patient harm. Litigation may also be a concern, although such concerns are secondary to the ethical considerations involving medical trainees. Although cryotherapy is a common therapeutic intervention in the dermatology clinic, it is not without risk, and medical students should expressly ask permission from the supervising physician before freezing any

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lesions. Even if the lesion was a benign melanocytic nevus, there are case reports of pseudomelanomatous changes being induced by cryotherapy, complicating care of the patient.[3] The student should have allowed the attending physician to assess the lesion's features before freezing it.[3]

Once the error has been made, it is the physician's responsibility to evaluate the lesion. The lesion has 2 features concerning for melanoma: irregular borders and a variegated pigmentation. Whether these changes are primary or secondary to the cryotherapy will be very difficult to ascertain clinically or dermoscopically once the lesion has been manipulated. From a deontologic ethics perspective, the dermatologist's duty is to rule out the life-threatening disease of melanoma whenever it is within the differential diagnosis. In considering whether to perform a biopsy of this lesion, the physician must balance the ethical principle of beneficence (ruling out melanoma) against the principle of nonmaleficence (pain and subsequent scarring). This case is complicated by the fact that the lesion might not have required biopsy had the medical student not pre-emptively frozen it.

Similar scenarios can arise with residents, fellows, and even physician assistants. We have specifically dealt herein with the issue of medical students because their youth and inexperience often result in them not being aware of what they do not know clinically. This lack of insight, in association with their enthusiasm to care for patients, can on occasion cause harm to patients. Self-education and education of all members of the care team (colleagues, residents, fellows, nurses, physician assistants, and medical students) is a lifelong process. However, medical students are unique members of this team because of their often unbridled enthusiasm, which we want to temper but not squelch.

ANALYSIS OF CASE SCENARIO

Reprimanding the student is appropriate, although there is no need to do so in front of the patient (option A). For the patient to witness this kind of admonishment will result in embarrassment for the medical student and increased anxiety for the patient, which may have the consequence of the patient being less likely to seek care at a teaching institution in the future.

Suggesting a 2-week follow-up would delay appropriate care and would constitute harm to the patient (option B) given that the lesion has atypical features. Additionally, histologic evaluation of the lesion will be more accurate at the current time, rather than after a postcryotherapy blister and subsequent scar develop. Although the distinction between options C and D is minor, it is important because patients have the right to be informed about actions performed on their body. This stems from the ethical principles of autonomy and informed consent. Option C omits the important detail that the cryotherapy may not have been indicated for the lesion. Withholding this information prevents patients from fully understanding the indication for the biopsy; as a result, they may be less likely to give their consent for the procedure. The American Medical Association Code of Medical Ethics states that "patients have the right to receive information and ask questions about recommended treatments so that they can make well-considered decisions about care."[4] Option D allows patients to have full information about what has occurred and enables them to make an informed decision about whether they will consent to a biopsy. Thus, we believe that option D is the optimal course of action for this scenario.

Regardless of what course of action is chosen, the student must be educated about the error at some point (preferably in a private meeting) so that he does not repeat this same behavior. Although medical schools differ widely in their remediation techniques, 1 large study of American and Canadian institutions found that strategies focusing on professionalism, mentoring, and helping rather than punishing students were effective.[5] In this scenario, the attending physician should meet with the student privately and clarify the expectations for student involvement during the dermatology clerkship. It may be beneficial for the attending to explain the aforementioned ethical considerations and the importance of open communication between trainees and faculty. Students should be made aware of their need for supervision at this juncture of their training. In addition, many medical students may seek clinical exposure before their official clinical rotations and thus may not be aware of their appropriate role on the patient care team. Awareness of one's limitations and inadequacies is an important lesson for students,

residents, and even attendings to embrace. Although the patient scenario described herein is admittedly rare, health care providers should be comfortable with techniques for both reprimanding and educating overzealous students.

BOTTOM LINE

This case fosters a conversation about the role of health care providers in addressing errors made by medical trainees, the need for medical students to recognize their boundaries in the health care team, and the need for obtaining informed consent from patients in these scenarios. Health educators often face the complex task of balancing medical student education and independence while optimizing patient care, especially in academic centers. In our case, medical student O pre-emptively froze a suspicious skin lesion without consulting his supervisor. In response, Dr AP had an ethical duty to disclose the error to the patient, and uphold the principle of beneficence by ordering a biopsy to rule out melanoma. Beneficence trumps nonmaleficence in this case, as the risk of undiagnosed melanoma outweighs the relatively small harm of leaving a scar. The principle of patient autonomy was also upheld, as the patient was provided with all of the information about the incident and was able to make an informed decision about whether to consent to a biopsy. Although the medical student should be reprimanded for this error, the discussion should occur in private and the attending physician should focus on education rather than punishment. This response reflects the connotation of the word *doctor*, from the Latin *doctore*, meaning teacher.

REFERENCES

1. Haber RJ, Lingard LA. Learning oral presentation skills: a rhetorical analysis with pedagogical and professional implications. *J Gen Intern Med*. 2001;16:308-314.
2. Hernandez C, Mermelstein R, Robinson JK, Yudkowsky R. Assessing students' ability to detect melanomas using standardized patients and moulage. *J Am Acad Dermatol*. 2013;68:83-88.
3. Adeniran AJ, Prieto VG, Chon S, Duvic M, Diwan AH. Atypical histologic and immunohistochemical findings in melanocytic nevi after liquid nitrogen cryotherapy. *J Am Acad Dermatol*. 2009;61:341-345.
4. American Medical Association. *Code of Medical Ethics;* 2016. Available from: https://www.ama-assn.org/delivering-care/ama-code-medical-ethics. Accessed August 29, 2017.
5. Ziring D, Danoff D, Grosseman S, et al. How do medical schools identify and remediate professionalism lapses in medical students? A study of U.S. and Canadian medical schools. *Acad Med*. 2015;90:913-920.