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A Short Dermatoscopy Training Increases Diagnostic Performance in Medical Students

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Abstract : BACKGROUND: Dermoscopy is a clinical tool known to improve the early detection of melanoma and other malignancies of the skin. Over the past few years melanoma has grown into a disease of socio-economic importance due to the increasing incidence and persistently high mortality rates. Early diagnosis remains the best method to reduce melanoma and non-melanoma skin cancer– related mortality and morbidity. Dermoscopy is a noninvasive technique that consists of viewing pigmented skin lesions through a hand-held lens. This simple procedure increases melanoma diagnostic accuracy by up to 35%. Dermoscopy is currently the standard for clinical differential diagnosis of cutaneous melanoma and for qualifying lesion for the excision biopsy. Like any clinical tool, training is required for effective use. The introduction of small and handy dermoscopes contributed significantly to the switch of dermatoscopy toward a first-level useful tool. Non-dermatologist physicians are well positioned for opportunistic melanoma detection; however, education in the skin cancer examination is limited during medical school and traditionally lecture-based. AIM: The aim of this randomized study was to determine whether the adjunct of dermoscopy to the standard fourth year medical curriculum improves the ability of medical students to distinguish between benign and malignant lesions and assess acceptability and satisfaction with the intervention. METHODS: We performed a prospective study in 2 cohorts of fourth-year medical students at Medical University of Warsaw. Groups having dermatology course, were randomly assigned to: cohort A: with limited access to dermatoscopy from their teacher only – 1 dermatoscope for 15 people Cohort B: with a full access to use dermatoscopy during their clinical classes:1 dermatoscope for 4 people available constantly plus 15-minute dermoscopy tutorial. Students in both study arms got an image-based test of 10 lesions to assess ability to differentiate benign from malignant lesions and postintervention survey collecting minimal background information, attitudes about the skin cancer examination and course satisfaction. RESULTS: The cohort B had higher scores than the cohort A in recognition of nonmelanocytic ($P < 0.05$) and melanocytic ($P < 0.05$) lesions. Medical students who have a possibility to use dermatoscope by themselves have also a higher satisfaction rates after the dermatology course than the group with limited access to this diagnostic tool. Moreover according to our results they were more motivated to learn dermatoscopy and use it in their future everyday clinical practice. LIMITATIONS: There were limited participants. Further study of the application on clinical practice is still needed. CONCLUSION: Although the use of dermatoscope in dermatology as a specialty is widely accepted, sufficiently validated clinical tools for the examination of potentially malignant skin lesions are lacking in general practice. Introducing medical students to dermoscopy in their fourth year curricula of medical school may improve their ability to differentiate benign from malignant lesions. It can can also encourage students to use dermatoscopy in their future practice which can significantly improve early recognition of malignant lesions and thus decrease melanoma mortality.

Keywords : dermatoscopy, early detection of melanoma, medical education, skin cancer
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