

mization, and, hopefully, a cosmetically and functionally improved reconstruction.

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Accepted for Publication: July 14, 2009.

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Financial Disclosure: None reported.

1. Zitelli JA, Moy RL. Buried vertical mattress suture. *J Dermatol Surg Oncol*. 1989;15(1):17-19.
2. Alam M, Goldberg LH. Utility of fully buried horizontal mattress sutures. *J Am Acad Dermatol*. 2004;50(1):73-76.
3. Kantor J. The set-back buried dermal suture: an alternative to the buried vertical mattress for layered wound closure. *J Am Acad Dermatol*. In press.
4. Dzubow LM. The use of fascial plication to facilitate wound closure following microscopically controlled surgery. *J Dermatol Surg Oncol*. 1989;15(10):1063-1066.
5. Radonich MA, Bisaccia E, Scarborough D. Management of large surgical defects of the forehead and scalp by imbrication of deep tissues. *Dermatol Surg*. 2002;28(6):524-526.

Lack of Lower Extremity Hair Not a Predictor for Peripheral Arterial Disease

Peripheral arterial disease (PAD) afflicts 8 to 12 million Americans, but nearly 75% of them are asymptomatic.¹ Physicians rely on history and physical examination to determine which patients require further evaluation. Physical findings that have been associated with arterial disease include a unilaterally cool extremity, skin atrophy and lack of hair, and abnormal pedal pulses, among others.² The disease spectrum ranges from exertional calf pain to chronic limb ischemia necessitating amputation. The suspicion of arterial disease often leads to further examination of the lower extremity vascular supply. Measurement of the ankle-brachial index (ABI) is a noninvasive method for detecting PAD and is about 95% sensitive and specific when the diagnostic cutoff is 0.9.³ In general, the accepted ABI for the presence of PAD is lower than 0.9, and that for severe disease is lower than 0.7.

The present observational case-control study was undertaken based on the clinical observation that many men seem to have hairless lower extremities. Our goal was to determine whether this physical sign is a predictor of PAD.

Methods. After obtaining institutional review board approval, we enrolled 50 subjects from Hershey Medical Center in the study. Twenty-five control subjects were recruited from various outpatient clinics and had documented normal ABI measurements (>0.9). Twenty-five subjects with PAD were recruited from the vascular clinic and had either an ABI lower than 0.9 or abnormal lower extremity arterial duplex findings. Subjects with ABIs lower than 0.9 due to disease other than PAD were excluded.

Subjects with diabetes who had abnormal ABIs were included in the disease group. Due to arterial calcification, the vessels in subjects with diabetes may be less compressible and so might generate falsely elevated indices.

Thus, the vascular disease of patients with diabetes is likely worse than the measured value.

Lower extremity hairs were counted on all subjects. First, a measurement was taken from the anterior tibial tuberosity to the proximal portion of the lateral malleolus. The distance was divided by 3, and hairs were counted at a location one-third of the distance proximal to the lateral malleolus. Scissors were used to trim hairs at this location to several millimeters in length. Temporary black hair dye was then applied to the area for approximately 1 minute. Excess dye was removed, and we took 2 pictures of the area using a magnified digital photography technique, which involved pressing the camera lens against the skin to make full contact while the photograph was taken. All photographs were taken with a Nikon D80 camera (Nikon USA Inc, Melville, New York), stored on a memory card, and uploaded to a computer where Photoshop (Adobe Systems Inc, San Jose, California) was used to crop them to standard dimensions of 2572 × 1564 pixels.

Hair count analyses were performed, and data were categorized as either leg hair present (1 or more hairs present in the examined field) or leg hair absent (no hairs present in the examined field). This assessment was performed on data from each of the 50 subjects. Statistical analysis was then completed using a χ^2 analysis.

Results. Of the 50 patients recruited for this study, 25 had existing PAD, and 25 were healthy controls (**Table**). Subjects in the control group had a mean age of 65 years (age range, 50-80 years). Those in the PAD group had a mean age of 75 years (age range, 55-88 years). Sixty-four percent of patients with PAD had absent leg hair, and 40% of patients without PAD had absent leg hair (Table). Using χ^2 analysis, we found no statistically significant relationship between disease presence and absence of lower extremity hair ($P = .09$).

Comment. Peripheral arterial disease involves atherosclerotic occlusions in the arterial system distal to the aortic bifurcation.⁴ It is mainly a disorder of advancing age, and one's risk of PAD is increased by cigarette smoking, diabetes, hypercholesterolemia, and hypertension.⁴ Because many patients are asymptomatic, physicians must recognize the early signs and take appropriate action. The goal of the present study was to determine whether the absence of lower extremity hair is a useful predictor of PAD. No statistically significant difference was found between the numbers of diseased patients without leg hair ($n = 16$) and control patients without leg hair ($n = 10$) ($P = .09$), sug-

Table. Presence of Lower Extremity Hair in Patients With and Without PAD

Lower Extremity Hair	Patients, No. (%)	
	With PAD ^a (n=25)	Without PAD (n=25)
Present	9 (36)	15 (60)
Absent	16 (64)	10 (40)

Abbreviation: PAD, peripheral arterial disease.

^aBy χ^2 analysis, no statistically significant relationship was found between disease presence and absence of lower extremity hair ($P = .09$).

gesting that a lack of lower extremity hair is not useful as a solitary predictor of disease. Therefore, we believe that it is best to consider this examination finding in the context of a patient's overall presentation and risk factors for PAD.

Our study has several limitations. The sample size was only 50 patients. In addition, no demographic information (including the presence of comorbidities such as diabetes, hypertension, or smoking) was recorded.

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Accepted for Publication: June 19, 2009.

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Author Contributions: All authors had full access to all the data in the study and take responsibility for the integrity of the data and accuracy of the data analysis. *Study concept and design:* Brueseke, Macrino, and Miller. *Acquisition of data:* Brueseke, Macrino, and Miller. *Analysis and interpretation of data:* Brueseke, Macrino, and Miller. *Drafting of the manuscript:* Brueseke, Macrino, and Miller. *Critical revision of the manuscript for important intellectual content:* Brueseke and Miller. *Administrative, technical, and material support:* Brueseke, Macrino, and Miller. **Financial Disclosure:** None reported.

Funding/Support: This study was supported in part by The Pennsylvania State University Department of Dermatology.

Role of the Sponsors: The sponsor had no role in the design or conduct of the study or in the collection, analysis, or interpretation of the manuscript.

1. American Heart Association. PAD quick facts. <http://www.americanheart.org/presenter.jhtml?identifier=3020248>. Accessed March 31, 2007.
2. Sontheimer DL. Peripheral vascular disease: diagnosis and treatment. *Am Fam Physician*. 2006;73(11):1971-1976.
3. Hummel BW, Hummel BA, Mowbray A, Maixner W, Barnes RW. Reactive hyperemia vs. treadmill exercise testing in arterial disease. *Arch Surg*. 1978;113(1):95-98.
4. Meijer WT, Grobbee DE, Hunink MG, Hofman A, Hoes AW. Determinants of peripheral arterial disease in the elderly: the Rotterdam study. *Arch Intern Med*. 2000;160(19):2934-2938.

COMMENTS AND OPINIONS

Association Between Thin Melanomas and Atypical Nevi in Middle-aged and Older Men Possibly Attributable to Heightened Patient Awareness

We read with interest the article "Melanoma in Middle-aged and Older Men" by Swetter et al.¹ As the authors noted, men with atypical nevi presented with thinner melanomas than those who lacked

atypical nevi. According to the study data, median tumor thickness in men with atypical nevi was 0.6 mm, whereas the median thickness was 1.15 mm in men without atypical nevi ($P = .02$). The authors suggest that men with atypical nevi may have greater knowledge and awareness of melanoma risk, resulting in earlier detection of their melanomas. Another explanation, suggested by Liu et al,² is that patients with atypical or increased numbers of moles have more indolent melanomas and thus present with thinner tumors.

Methods. To reconcile these alternate explanations, we analyzed the New York University (NYU) database of patients with melanoma prospectively enrolled from 1972 through 1982, many years prior to our colleagues' publication of the melanoma ABCD rule (asymmetry, borders, colors, and diameter >6 mm)³ and during an era of much less public awareness of the importance of early melanoma detection. Each patient in the NYU cohort was assessed for numerous clinical factors, including number of nevi.⁴ However, these patients were enrolled before the significance of atypical nevi was recognized as a risk factor for melanoma, so counts of atypical nevi were not recorded for any patient in the database. Multiple studies, including Roush and Barnhill⁵ and Nordlund et al,⁶ have found that individuals with atypical nevi have a higher number of total nevi. These publications suggest that an analysis of number of nevi and median tumor thickness is comparable to the analysis of atypical nevi and tumor thickness performed by Swetter et al.¹

Results. The accompanying **Table** and box plot (**Figure**) summarize data from all men older than 40 years in our cohort ($n = 419$) and show that tumor thickness did not vary significantly with the number of moles ($P > .99$ in the Kruskal-Wallis nonparametric analysis of variance test). These data suggest that melanomas arising in patients with increased numbers of nevi are not inherently more indolent than melanomas arising in patients with an average (or less than average) number of nevi.

Comment. Although these data contrast with those of Swetter et al,¹ taken together these findings suggest that increased public awareness and educational efforts may have led to earlier detection of melanoma. Swetter et al demonstrated that men who were aware of melanoma, understood the importance of skin examinations, and showed an overall interest in their health were more likely to present with thinner tumors. At our own institution, we have noted a substantial decrease in tumor thickness

Table. Tumor Thickness by Number of Moles

Group	Patients, No.	Moles, No.	Tumor Thickness, Median, mm
1	9	0	1.40
2	328	1-25	1.60
3	85	26-100	1.40
4	36	>100	1.85