

Thick Plaques on the Foot

What's the diagnosis?



A 60-year-old man presented to the dermatology clinic with 2 thick plaques on the top of the left foot of at least 5 years' duration with no recent changes. The bumps were not itchy or painful. The patient had a medical history of diabetes mellitus and hypertension. He did not report any recent travel. He denied cough, shortness of breath, weight loss, and fatigue. The patient was asked about any hobbies or activities that involved repeated pressure to the dorsal aspect of the foot. He revealed that his religious obligations required him to pray 5 times daily.

Edward C. Monk, MD; Eve J. Lowenstein, MD, PhD

Dr. Monk is from Westmed Medical Group, New Rochelle, New York. Dr. Lowenstein is from the Department of Dermatology, SUNY Downstate Medical Center, Brooklyn, New York.

The authors report no conflict of interest.

Correspondence: Edward C. Monk, MD, Westmed Medical Group, 171 Huguenot St, New Rochelle, NY 10801 (ejmonk123@gmail.com).

The Diagnosis: Prayer Callus

After our patient demonstrated his routine position for prayer (Figure), the diagnosis of prayer callus was confirmed. We suggested he use a foam pad under his foot during prayer. The patient did not return for follow-up.

Prayer calluses have been documented in the literature as prayer nodules¹⁻³ or marks.⁴ *Callus* is a preferred term, as it implies the act of repeated pressure or friction to an area of the skin. It is more descriptive than *marks* and avoids the inclusion of *nodules* caused by different prayer or religious activities such as ritual scarring.⁵

Abanmi et al⁴ studied a large group (N=349) of Muslim patients with regular praying habits and found a high prevalence of what they referred to as prayer marks, defined by lichenification and/or hyperpigmentation, on the knees, forehead, ankles, and dorsal aspects of the feet. They studied the histopathology of 33 marks. No statistical analysis was performed. They reported common histologic findings of compact

orthokeratosis, hypergranulosis, dermal papillary fibrosis, and dermal vascularization. In contrast to lichen simplex chronicus, the authors found that the dermal fibrosis did not exhibit collagen bundles perpendicular to the epidermis.⁴

This study found that a higher prevalence of lichenification was observed on the left foot (males, 57%; females, 39%) than the right foot (males, 14%; females, 19%), which was attributed to a more typical prayer position that placed pressure on the left foot.⁴ Our patient only had calluses on his left foot, which was consistent with the prayer position.

Treatment options for prayer calluses include debridement, either mechanical or with topical keratolytic preparations. There is a high likelihood of recurrence if prayer practices are not changed. Optimally, more definitive treatment, which can be combined with initial debridement, would be position adjustment to lessen pressure or friction to the area or protection over the area with a cushion, as we attempted with our patient in the form of a foam pad.



The position of the patient's left foot while praying.

REFERENCES

1. Kahana M, Cohen M, Ronnen M, et al. Prayer nodules in Moslem men. *Cutis*. 1986;38:281-282.
2. Vollum DI, Azadeh B. Prayer nodules. *Clin Exp Dermatol*. 1979;4:39-47.
3. Kumar PV, Hambarsoomian B. Prayer nodules fine needle aspiration cytologic findings. *Acta Cytol*. 1988;32:83-85.
4. Abanmi AA, Al Zouman AY, Al Hussaini H, et al. Prayer marks. *Int J Dermatol*. 2002;41:411-414.
5. Bourrel P. Problems related to African customs and ritual mutilations [in French]. *Contracept Fertil Sex (Paris)*. 1983;11:1351-1358.