

Cutaneous Signs of Piety

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Practice Points

- Cutaneous changes may be seen in specified areas of the skin following regular worship in almost all major religions of the world.
- Cutaneous lesions are most commonly associated with friction from praying, along with contact allergic dermatitis from products and substances commonly used in worshipping and granulomas due to practices such as tattoos and skin piercing.
- Uncommon skin manifestations include urticaria and leukoderma.
- Some religious practices may render individuals prone to infections that manifest on the skin.

It is important for dermatologists to be aware of cutaneous changes related to religious practices to help in their recognition and management. The anatomic location of cutaneous lesions associated with friction from praying varies based on religious practice. Allergic contact dermatitis from products and substances commonly used in worshipping also vary by religion. Some religious practices may render individuals prone to infections that manifest on the skin. Tattoos of godly figures also may adorn the body. Religious practices also have been implicated in cases of urticaria, köbnerization, and leukoderma. This article reviews the clinical presentation of some of the most common cutaneous changes that occur in individuals who practice the following religions: Christianity, Islam, Judaism, Hinduism, and Sikhism.

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Religious practices can lead to cutaneous changes, and awareness of these changes is of paramount importance in establishing the cause. We review the cutaneous changes

related to religious practices, including the Semitic religions, Hinduism, and Sikhism (Table). The most widely followed Semitic religions are Christianity, Islam, and Judaism. Christianity and Islam collectively account for more than half of the world's population.¹

Christianity

Christian individuals are prone to blisters that develop below the knees due to repeated kneeling in prayer.² A case of allergic contact dermatitis to a wooden cross made from *Dalbergia nigra* has been reported.³ Localized swelling with hypertrichosis due to muscular hypertrophy in the lower neck above the interscapular region has been described in well-built men who lift weights to bear *pasos* (floats with wooden sculptures) during Holy Week in Seville, Spain.⁴

Islam

Cutaneous signs of piety have been well documented in Muslim individuals. The most common presentation is hyperpigmentation of the forehead, usually noted as a secondary finding in patients seeking treatment of unrelated symptoms.⁵ Cutaneous changes in this region correspond with the area of the forehead that rests on the carpet during prayer. Macules typically present on the upper central aspect of the forehead close to the hairline and/or in pairs above the medial ends of the eyebrows; sometimes 3 or 4 lesions may be present in this area with involvement of the nasion (Figure 1).⁶

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Cutaneous Changes Related to Religious Practices

Cause	Common Presentation Based on Religious Practices				
	Christianity	Islam	Judaism	Hinduism	Sikhism
Friction	Pew blisters below the knees; circumscribed hypertrichosis over a hypertrophic muscle mass on the lower neck	Hyperpigmented and lichenified changes on the forehead, nasal root, right knee, left ankle, and rarely the knuckles; nodule on the left ankle; localized alopecia on the forehead in individuals with a low hairline; vitiligo in women from safety pin used to secure headscarf	Hyperpigmented macules on the lower back	Calluses on or uncommonly below the lateral malleolus of the right foot; hyperpigmentation of the knees, ankles, and interphalangeal joints of the feet	Chondrodermatitis of the pinnae
Allergic contact dermatitis	Wooden cross made from <i>Dalbergia nigra</i>	Perfume	Associated with a variety of agents in phylacteries	Associated with substances applied on the forehead and other body areas; neck can be affected by plant-derived beads for necklaces	Beard fixers
Tattoos	May be seen	Forbidden	Forbidden	Common	May be seen
Traction	NA	NA	NA	NA	Alopecia of the face and scalp

Abbreviation: NA, not applicable.

In Saudi Arabia where Sunni Islam predominates, Muslim individuals observe prayer 5 times per day. Calluses have been observed in areas of the body that are frequently subject to friction during this practice.⁷ For instance, calluses are more prominent on the right knee (Figure 2) and the left ankle, which bear the individual's weight during prayer, and typically become nodular over time (Figure 3). In Arabic, these calluses are referred to as *zabiba*.⁸

A notable finding in followers of Shia Islam, which predominates in Iran, is the development of

small nodules on the forehead, possibly caused by rubbing the forehead on a flat disclike prayer stone called a *mohr* during daily prayer,⁹ which is said to enhance public esteem.¹⁰ The nodules generally are asymptomatic, but some individuals experience minimal pain on pressure.⁸ Ulceration of the nodules has rarely been observed.⁷

Limited access to thick and soft carpets and rarely bony exostoses or obesity are factors associated with prayer that can lead to skin changes (known as prayer signs), as they render the skin sensitive to pressure.



Figure 1. Three hyperpigmented macules from resting the forehead on a carpet during prayer.



Figure 3. Nodular callosity on the left ankle from prayer.



Figure 2. Keratotic plaques over the knees from prayer. Calluses are more prominent on the right knee.

Localized alopecia may occur on the forehead in individuals with low or pointed hairlines. An unexplained finding noted by one of the authors (K.A.) in some elderly Muslim individuals is that hair located on the forehead at the point of pressure during prayer remains pigmented, while the rest of the hair on the scalp turns white. Hyperpigmentation of the knuckles may be seen in individuals who use closed fists to rise from the ground following prayer. Except for mild hyperpigmentation of the knees,⁷ Muslim women rarely develop these changes, as they either do not pray,¹⁰ particularly during menstruation or puerperium, or they have more subcutaneous fat for protection.⁷ Some Muslim individuals who pray regularly at home may be conscious of these skin changes and therefore use a soft pillow to rest the forehead during prayer.

The histopathologic findings of prayer signs depend on the extent of lichenification and typically show compact hyperkeratosis or orthokeratosis, hypergranulosis, acanthosis, and mild dermal

inflammation.⁸ Increased dermal vascularization and papillary fibrosis unlike that seen in lichen simplex chronicus have been described from skin changes in the lower limbs due to prayer practices.⁷ Additional findings in forehead biopsies include multiple comedones and epidermoid cysts in elderly patients showing a foreign body granulomatous reaction to hair fragments.¹⁰ Deposition of mucinous material in the dermal collagen in a prayer nodule on the forehead has been described in a Shiite individual, possibly due to repetitive microtrauma from the use of a prayer stone.⁹ Infections developed from sharing communal facilities or performing ritual sacrifices (eg, tinea,¹¹ orf¹²) are prevalent during the yearly Hajj pilgrimage at Makkah, Saudi Arabia, in addition to other infectious and noninfectious dermatoses.¹³ Muslim women wearing headscarves secured at the neck with a safety pin have developed vitiligo at that site due to friction.¹⁴ Occasionally, Muslim individuals may apply perfumes before prayers, which may cause allergic contact dermatitis.

Judaism

Hyperpigmentation has been described in Jewish men at Talmudic seminaries due to the practice of reciting scriptures, which involves a rocking motion known as daven that leads to friction on the back.¹⁵ Lesions associated with this practice typically appear as isolated macules or a continuous linear patch over the skin of the bony protuberances of the inferior thoracic and lumbar vertebrae. Allergic contact dermatitis has been reported in Jewish individuals due to exposure to a variety of agents during religious practices, such as potassium dichromate, which is present in the leather used to make phylacteries or tefillin (boxes containing scripture that are secured

to the forehead with straps that are then tied to the left arm during prayer). This finding has been noted in some or all areas of contact including the forehead, scalp, neck, left wrist, and waist.¹⁶

It is customary for both Orthodox Jewish and Muslim women to be concealed by clothing, which predisposes them to vitamin D deficiency^{17,18} but also protects them from developing malignant melanoma.¹⁹ Neonates have developed genital herpetic infections following circumcision due to the ancient practice of having the mohel (the person who performs the Jewish circumcision) suck on the wound until the bleeding stops.²⁰

Hinduism

Hinduism espouses an eclectic philosophy of life subsuming numerous beliefs involving guardian deities, invoked by sacred marks, symbols, and rituals. Marks generally are placed on the forehead or other specified sites on the body. Sandalwood paste as well as *vibhuti* and kumkum powders most commonly are used, which can cause allergic contact dermatitis. *Vibhuti* is holy ash prepared by burning balls of dried cow dung in a fire pit with rice husk and clarified butter. Kumkum is prepared by alkalizing turmeric powder, which turns red in color. A case of contact allergic dermatitis was reported in a Hindu priest who regularly used sandalwood paste on the forehead and as a balm for an ailment of the hands and feet.²¹ In our experience, *vibhuti* also has caused dermatitis on the forehead as well as on the neck and arms. The main difference between the 2 eruptions is that sandalwood dermatitis generally is localized to the center of the forehead as a circular or vertical mark or often in the center of the left palm, which is used to mix sandalwood powder with water to make a paste (Figure 4), while *vibhuti* contact dermatitis typically presents as a broad horizontal patch on the forehead because the powder is smeared with the middle 3 fingers (Figure 5). Perfumes used by some Muslim individuals before prayer that are applied on the clothes can mimic this type of contact dermatitis, but eruptions typically are confined to the fingers and palms.²² Contact dermatitis caused by necklaces made with beads of the stem of the *Ocimum sanctum* (holy basil) plant and seeds of the evergreen tree *Elaeocarpus ganitrus* have been reported.²³ Calluses are sometimes seen in individuals who meditate for long hours while sitting in a cross-legged position and usually occur on or uncommonly below the lateral malleolus of the right foot, similar to practitioners of yoga.²⁴

Hemorrhaging and crusting below the lateral malleolus of the right foot have been reported



Figure 4. Dermatitis on the palm and forehead from mixing sandalwood powder with water and then applying a sacred mark on the forehead.



Figure 5. Broad horizontal band of *vibhuti* dermatitis on the forehead.

in Buddhist monks due to sitting in a cross-legged position for prolonged periods of meditation.²⁵ Hyperpigmentation of the knees, ankles, and interphalangeal joints of the feet has been seen after sitting in the traditional Japanese meditative position.²⁶ Tattoos of Hindu gods are common, while tattoos are forbidden in Islam and Judaism. Attributes of prominent deities branded on the body may be seen. Discrete sarcoidlike nodules along the axillae and chest wall have been attributed to a Hindu ritual (*kavadi*) that is performed annually as a form of self-inflicted punishment for their sins in which devotees pierce the chest wall with spokes to form a base over a heavy cage in which offerings are carried, and skewers passed through the cheeks have resulted in similar nodules in the oral cavity.^{27,28} Consumption of cow's urine during rituals may induce acute urticaria.²⁹ Lichen planus of the trunk³⁰ and leukoderma of the waist³¹ may be induced by *köbnerization* or contact allergy from wearing sacred threads, respectively.

Sikhism

Sikhism, a religion founded in the 15th century, epitomizes the high-water mark of the syncretism between Hinduism and Islam. Men must abstain from cutting their hair; pulling and knotting the hair to maintain a coiffure can cause traction alopecia in the submandibular region and the frontal and parietal areas of the scalp as well as ridging and furrowing of the scalp resembling cutis verticis gyrata. Fixer, a product used to keep the beard intact, can cause contact dermatitis. The tight broad band of cloth (known as a ribbon) that is worn around the head to keep hair intact beneath a turban may cause forehead lesions. Discoid lupus erythematosus-like lesions or painful chondrodermatitis of the pinnae due to pressure from wearing a starched turban have been observed, also called “turban ear” from prominence of both anthelices.^{32,33} A case of a Sikh man who developed oral sarcoid lesions from body piercing has been reported.²⁸

Conclusion

Knowledge of the religious practices of patients would help in recognizing puzzling and peculiar dermatoses. It may not be possible to eliminate the causes of these conditions, but methods to reduce their effects on the skin can be discussed with patients.

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