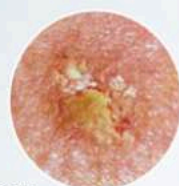


Pre-cancerous clue: Actinic keratosis

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Actinic keratoses (AKs), also known as solar keratoses, are among the most common skin findings seen in dermatology clinics. They are skin lesions caused by chronic sun exposure, and may appear harmless. However, these lesions can develop into a type of skin cancer called squamous cell carcinoma and should be treated by a physician.



Appearance

AKs can present in a variety of ways: As a single isolated lesion or many widespread lesions, each ranging in size from two to five millimetres in diameter. Some can even grow to a few centimetres across.

Because AKs are associated with sun damage, they present in sun-exposed areas of the body, including the face (most commonly), the backs of the hands, the forearms and on the scalps of balding men. Commonly affected areas of the face include the ears, nose, cheeks, lips and forehead. When you run your fingers on an AK, it may feel rough, dry, scaly or warty. The lesions can be either flat or thickened. Thicker lesions might need more aggressive management.

AKs typically have an underlying colour ranging from pink to red to brown, often with an overlying slightly white or yellow scale. Many lesions

have no symptoms, but some can be tender to the touch or itchy.

Cause and risk factors

AKs are caused by years of prolonged sun exposure, which causes DNA damage in skin cells resulting from the powerful UVB rays of the sun. If you have fair skin, light-coloured eyes and red or blond hair then you may be at increased risk for AKs. You are also at increased risk if your occupation makes you prone to sun exposure, or if you have a history of severe, blistering sunburns.

A poorly functioning immune system can also increase your risk of developing these lesions and, more importantly, of developing subsequent squamous cell carcinoma. If you have HIV/AIDS, are receiving chemotherapy or have previously received an organ transplant then you may have a weakened immune system.

Other risk factors for AKs include tanning-bed use, living in a tropical area of the world, age 40 years or older and a history of previous AKs.

Management

If you think that you may have AKs based on your sun-exposure history and risk factors for their development, you should seek medical management from a physician. The treatment options vary depending on location and how many AKs you have, as well as their size and thickness. Treatments are geared towards reducing the risk of cancer, relieving symptoms and improving the cosmetic appearance.

Treatment for isolated AKs

Liquid nitrogen cryotherapy, sometimes referred to as “freezing,” is the most common way to treat an AK. It is a safe and quick procedure that causes the lesion to blister or peel. Side effects can include temporary discomfort, scabbing or blistering, or uneven pigmentation after the procedure. If the AK is particularly thick or

worrisome then surgical removal may be preferred and the tissue can be biopsied to rule out skin cancer. The side effects of surgery are similar to those of cryotherapy, with the added rare risk of infection.

Treatment for widespread AKs

A variety of creams and gels (e.g., 5-fluorouracil, imiquimod, ingenol mebutate) can be applied to the affected areas for “field therapy.” These topical treatments take longer to eradicate AKs, but may be better suited for extensive lesions.

Photodynamic therapy involves applying a photo-sensitizing solution to the affected areas and then exposing those areas to synthetic light. The light causes a chemical reaction, which leads to the eradication of the AKs.

Prevention

The main way to prevent AKs is to protect yourself against sun exposure.

1 Always remember to apply sunscreen regardless of the season (summer, winter, fall, spring) and monitor your local UV index. A sunscreen with an SPF of 30 or higher is recommended, and should be reapplied every two hours.

2 Wear protective clothing to reduce your skin’s exposure to harmful UV rays and seek shade when necessary. Dress in a long-sleeved shirt and long pants, and wear a wide-brimmed hat.

3 Avoid or minimize your exposure to the sun during peak hours of the day (typically 10am–4pm).

4 Do not use tanning beds—their use has been linked to skin cancer.


Conclusion

AKs are pre-cancerous lesions but, if caught early, there are many excellent treatment options to prevent their progression to squamous cell



Following up with your doctor

- AKs can recur a few months or years after treatment.
- Schedule periodic full skin examinations with your doctor if you are at high risk for developing AKs.
- Although a family doctor can monitor your AKs, patients with a history of skin cancer or multiple AKs may be referred to a dermatologist for management.
- If you have suspicious lesions on your skin that look like AKs, but also bleed or ulcerate, book an appointment with your family doctor or dermatologist as soon as possible.

carcinoma. If you think that you may have AKs or if you have many risk factors for their development, book an appointment with your family physician or dermatologist to assess your skin. 

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