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ON THE VERGE OF CANCER: SKIN AND MUCOUS MEMBRANE CONDITIONS THAT PRECEDE MALIGNANT NEOPLASMS

Ayubova N.M.

Tashkent State Dental Institute. (Tashkent.Uzbekistan).

Abstract: The article summarizes information about actinic keratosis, presents modern literature data on the epidemiology of the disease, the features of the clinical picture, diagnosis, differential diagnosis, therapy of the disease

Keywords: actinic keratosis, solar keratosis, senile keratosis, precancerous skin lesion, chronic photodamage, squamous cell carcinoma in situ, solar radiation, ultraviolet, actinic cheilitis.

Introduction

Some skin and mucous pathologies are considered as precursors of oncological diseases. These conditions are not cancer, but significantly increase the risk of its development in the future. Timely detection and treatment of such changes is extremely important to prevent the transition to a malignant form. Regular examinations by a dermatologist and other specialists will help to detect and control precancerous processes in time, reducing the likelihood of cancer development. Solar or senile keratosis, also known as actinic keratosis, is a keratotic and erythematous change in the skin that occurs in adults regularly exposed to sunlight [Freeman RG. Carcinogenic effects of solar radiation and prevention measures. Cancer 1968; 21:1114–20]. Actinic keratosis is usually considered a precancerous condition with a small individual risk of developing a malignant tumor and the likelihood of spontaneous disappearance. A study evaluating the recurrence rate of actinic keratosis (AK) after its complete disappearance found that 57% of cases relapse. The results indicate that AK left untreated is not a static but a developing disease that is not characterized by spontaneous and final healing. Given the likelihood of developing into invasive squamous cell carcinoma (SCC) and the lack of reliable prognostic methods to identify foci at risk of transformation, timely treatment of AK and carcinogenesis zones is recognized as a necessary measure.

Epidemiology.

Epidemiological studies indicate a high frequency of AK in people with skin phototypes I-III and an increase in the incidence of AK worldwide in recent years. AK is becoming the most common carcinoma in situ in humans. In addition to gender and age, there are other risk factors associated with cumulative exposure to ultraviolet radiation. People with AK often have features of dermatoheliosis, such as freckles, solar lentigines, and wrinkles. Geographical factors such as altitude and latitude, prolonged sun exposure (including travel to southern countries and the tanning trend), childhood sunburn, sensitive skin, phototype, genetic disorders (eg, xeroderma pigmentosum), and immunodeficiency states contribute to the development of AK. The incidence of actinic keratosis (AK) varies depending on the intensity of solar radiation in a particular region, ranging from 6% to 25%. In Tashkent, Uzbekistan, and among Europeans over 40, the prevalence of AK is 6-15%, while in the

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United States it is 11-26%. The highest incidence rates are observed in countries located near the equator and populated by Caucasians, such as Australia, where the prevalence of AK among the population over 40 reaches 40-60%. Differences in occupational exposure to ultraviolet radiation may explain the higher prevalence of AK in men than in women, especially at a younger age. Finally, it should be emphasized that cases of actinic keratosis (AK) are being registered more often every year. This leads to the fact that general practitioners and internists increasingly diagnose this disease during their visits to patients. In this case, they have to carry out differential diagnostics of AK with other inflammatory skin diseases, such as seborrheic dermatitis, discoid lupus erythematosus, contact dermatitis, eosinophilic granuloma of the face, as well as basalioma and squamous cell skin cancer.

Pathogenesis. The key factor in the development of actinic keratosis is prolonged exposure to sunlight. Skin damage by light is caused by the accumulated volume of radiation, that is, the total amount of radiation received by a person during his life. Ultraviolet causes changes in the TP53 gene, which is responsible for suppressing tumor growth. Disruption of the p53 gene provokes unregulated proliferation of keratinocytes and the formation of areas of actinic keratosis.

With weakened immunity, persisting for more than two decades, the probability of developing actinic keratosis reaches 40-60%, with a high tendency to degenerate into squamous cell skin cancer.

Clinic.

Symptoms can vary from subtle signs to obvious defects. The shade can range from pale pink to deep brown. Patients often experience itching, burning or tingling in the affected area. As a rule, the skin of the bridge of the nose is affected, where dilated vessels can be seen against the background of pigmentation. This characterizes the erythematous variety. When the process is localized on the forehead and upper eyelid, the main element is a thickened plaque with dense horny layers, forming a cutaneous horn. This indicates a hypertrophic form. With the pagetoid form, the rash resembles seborrheic keratoma in appearance and brown color. This manifestation is characteristic of the pigmented or papillomatous form of the disease. In the case of damage to the lower lip with the formation of cracks and erosions, they talk about actinic cheilitis. In addition, actinic keratosis can occur on exposed areas of the body, such as the neck, shoulders, hands, forearms, ears, cheeks and scalp. There are three possible course of actinic keratosis lesions: spontaneous regression, stable course without a tendency to progress, transformation into squamous cell carcinoma.

Diagnostics.

Timely referral to a dermatologist is crucial for the detection and treatment of actinic keratosis. There are various approaches to therapy, such as cryotherapy, topical medications, and surgery. Prevention of actinic keratosis involves reducing the time spent in direct sunlight, regularly using sunscreens, and wearing clothing that protects against ultraviolet radiation. Diagnosis of actinic keratosis is based on visual manifestations, dermatoscopy data, and histological analysis results.

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Photofinder is used as a non-invasive procedure for detecting actinic keratosis, which is highly sensitive (90%) and specific (98.6%). Photofinder allows you to track the dynamics of the disease during treatment, due to the ability to assess cellular atypia, comparable to histological examination.

Treatment.

In modern medical practice, there are many approaches to the treatment of actinic keratosis. The most common is local exposure. In particular, laser technologies and topical gels are used. CO2 laser treatment is carried out in sessions. The topical gel - Imiquimod, should be applied for sixteen weeks.

Conclusion.

Given the increased solar activity in Uzbekistan, it is extremely important to use broad-spectrum sunscreens (protecting against UVA and UVB rays) with an SPF of at least 30. They should be applied to all exposed areas of the skin before going out in the sun. People with risk factors for developing actinic keratosis, especially those with fair skin, are advised to avoid direct sunlight between 10:00 and 15:00 in the summer months, wear long sleeves, wide-brimmed hats or use umbrellas, and avoid visiting solariums.

Teaching patients how to self-examine their skin and identify changes in areas exposed to chronic sun exposure is crucial for the early diagnosis and timely treatment of actinic keratosis. The choice of treatment tactics depends on various factors, such as location, duration of the disease, number of lesions, patient age, concomitant diseases and the presence of immunosuppression. In some cases, combined treatment may be required. Due to the risk of malignant transformation of actinic keratosis into squamous cell carcinoma, treatment is recommended in all cases. If a malignant process is suspected, a histological examination should be performed.

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