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Research Article

MODERN METHODS OF TREATMENT OF FLAMING NEVUS

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ABSTRACT

Histological and immunohistochemical research methods make it possible to reliably judge the degree of dysplastic changes in the epidermis in AK and its invasive potential. However, in most cases, the sampling of biopsy material causes certain difficulties, as it can leave cosmetic defects. Considering that the most common localization of AK is the skin of the face, it seems relevant to use more widely non-invasive research methods in the diagnosis and determination of the nature of the growth.

KEYWORDS

Medicine. Methodology, methodology, dermatovenereology, Modern methods.

INTRODUCTION

One of the criteria for the level of dysplasia is the proliferative activity of cells [Chaichamnan K., 2010; Nazarian R.M., 2009], which largely determines their growth rate and malignant potential. The most informative way to visualize and assess the proliferative activity of cells is an immunohistochemical study, since markers reveal not only cells in mitosis itself, but also those that are in the process of preparing for division and, therefore, indicate a proliferative potential [Kushlinsky N.E. et al., 2001; Petrov C.V. et al., 2004]. Numerous studies of tumors from various tissues indicate a relatively low proliferative activity of benign tumor cells, while malignant processes have a high level of proliferation

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[Chaichamnan K. Et al., 2010; Nazarian R.M. et al., 2009]. Previously, it was shown that AK has a low proliferative activity of cells compared to cancer in situ and squamous cell carcinoma [Bordbar. A.D., 2007; Talghini S., 2009]. In addition, there is a relationship between the level of proliferation of keratinocytes and an increase in the amount of elastic material in the dermis in AK and cancer in situ [Chang Geun Cho, 1999]. Given the isolated nature of the studies, it seems very important to continue studying the correlation between the proliferative potential of cells and the nature of dermal elastosis, not only in benign and malignant skin tumors, but also in various types of AK. This study will also allow evaluating the prospects of using elastosis ,d,derma as an indirect morphological marker of aggressive AK growth.

The main results and findings

Currently, due to the advent of sensors with a pulse generation frequency of 50, 75 and 100 MHz, which allow differentiating the epidermis and dermis, the total thickness of which does not exceed 5 mm, ultrasound is beginning to be actively used in dermatology [Jasaitiene D., 2011]. The expediency of using ultrasound in the diagnosis of a number of skin tumors, assessing the condition of the skin in chronic dermatoses during therapy has been shown [Bakulev A.L., 2009; Kurdina M.I., 2009]. Given the lack of data on the study of AK using ultrasound, it seems relevant to identify its ultrasonic features for the subsequent use of high-frequency ultrasound in non-invasive diagnostics.

PURPOSE OF THE STUDY

To develop additional diagnostic criteria for actinic keratosis based on the study of immunomorphological and ultrasound features of the tumor.

Research objectives:

1) To study the features of the clinical course of actinic keratosis.

2) To study the frequency of histological types of actinic keratosis and the level of epidermal dysplasia in each of them.

3) Determine the nature of elastin expression in the dermis in actinic keratosis.

4) To study the level of expression of the proliferation marker Cl 67 in the epidermis and determine its correlation with the nature of the distribution of antibodies to elastin in the dermis.

5) Determine the ultrasound signs of actinic keratosis and confirm them with morphological research methods.

Scientific novelty

1) For the first time, the frequency of histological types of actinic keratosis and the level of epidermal dysplasia in each of them were determined;

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2) For the first time, the variable nature of the proliferative activity of cells was established in various histological types of actinic keratosis

3) For the first time, the features of the expression of antibodies to elastin and variants of its distribution in the dermis in actinic keratosis have been established.

4) For the first time, based on an immunohistochemical study, a direct relationship was revealed between the level of proliferative activity of cells in the epidermis and the nature of elastin expression in the dermis.

5) For the first time, ultrasonic signs of actinic keratosis were described and compared with the expression of elastin in the dermis during an immunohistochemical study..

Practical value

1) A direct relationship has been established between the level of proliferative activity of epidermal cells and the nature of elastin expression in the dermis, which makes it possible to use the level of elastosis as an indirect marker of aggressive tumor growth

2) An ultrasonic method for diagnosing actinic keratosis has been developed and put into practice. The main ultrasound sign of actinic keratosis is the presence in various parts of the dermis of a strip-like hypoechoic zone (narrow, wide or total), which coincides with the distribution of elastin in the dermis.

3) The width of the hypoechoic zone, detected by a non-invasive ultrasound method for diagnosing actinic keratosis, makes it possible to indirectly judge the proliferative activity of epidermal cells.

An increased incidence of malignant neoplasms of the skin in the population in regions with excessive insolation has been observed for many years [1]. Numerous studies show that ultraviolet radiation in certain spectra plays a leading role in the development of skin cancer. It is known that the stratum corneum of the epidermis retains about 90% of the incident light, and the presence of melanin pigment is a filter for carcinogenic wavelengths [2]. However, with excessive UV radiation, the protective properties of the epidermis are not enough, as a result of which it penetrates to the deep layers of the dermis, causing precancerous dermatoses, which can subsequently lead to malignant neoplasms.

Patients with certain genetic syndromes are also at increased risk of solar keratosis. These syndromes are characterized by chromosomal cell damage in response to the mutagenic action of UV radiation. These include albinism, xeroderma pigmentosum, Rothmund-Thompson, Bloom, and Cockayne syndromes [1]. The most well-known disease is xeroderma pigmentosum, which is based on a defect in DNA repair, leading to increased cell sensitivity to UV rays. The earliest clinical sign of xeroderma pigmentosa is photodermatitis of open skin areas, which occurs

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even with minimal insolation. In particular, cases of development of solar keratosis in children suffering from pigment xeroderma are described. [2].

CONCLUSION

The main factors involved in the pathogenesis of AK are UV rays of the spectra A and B. They cause damage to the DNA of keratinocytes and the occurrence of mutations in the p53 gene responsible for suppressing the uncontrolled growth of genetically defective and, therefore, potentially tumor cells. Also, UV radiation of these spectra has a pronounced immunosuppressive effect, which limits the ability of Langerhans cells to recognize and destroy atypical, proliferating cells [2]. To date, a number of researchers are trying to prove the role of human papillomavirus (HPV) in the pathogenesis of AK. So, according to some authors, in pathological foci, by quantitative real-time PCR, viral DNA 5, 8, 15, 20, 24, 36 HRU types are detected. Moreover, the amount of NRU DNA detected in AK is significantly higher than in the foci of squamous cell carcinoma taken as a control group [5]. According to the results of other studies, there is no direct relationship between human papillomavirus infection and the development of AK, however, in combination with key risk factors

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