



## **THE USE OF ARTIFICIAL INTELLIGENCE IN THE DIAGNOSIS AND TREATMENT OF SEXUALLY TRANSMITTED SKIN DISEASES IN CHILDREN**

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### **Abstract**

This article focuses on the diagnosis of sexually transmitted skin diseases in children and their positive and negative changes using artificial intelligence to reduce but make effective the latest clinical services and treatment dates provided to patients in the world during treatment.

**Keywords:** About AI, useful skin products, effective treatment, preliminary detection of tumors, advantages of artificial intelligence, the origin of skin diseases, skin damage caused by radioactive substances, laboratory skin biopsy and artificial intelligence testing.

### **Introduction**

In all respects, skin is one of our protective derivatives. As a sensitive and excretory organ, the skin plays an important role in homeostasis, isolation, vitamin D secretion, immune enhancement, UV protection, and prevention of loss of body fluids. Through it, the baby's body breathes, carrying out gas exchange with gaseous O<sub>2</sub> through 2% of our body. Secretory fluids flow down between the harmonicas onto its surface. Breast milk, which is important for infants during the newborn period, is also included in the list of skin derivatives. On the other hand, skin pollution and the inability to breathe cause various diseases in children. From the moment the child is born, it is necessary to ensure that he is bathed at intervals of every 2 days and in accordance with the temperature of the water, towels (feet,



hands, head), shampoos made from particularly useful hygienic clean products, and odorless household soap. Most moms have messages about this.

There are many products that are good for the skin, for example: natural vitamin D, we can also get it from sunlight, fish oil, dairy products: yogurt, cottage cheese, yogurt, cheeses, cheese, of course, if the mother consumes it to the child, it reaches through milk.

The types of skin diseases conditions that can affect or damage your skin are known as skin diseases. These diseases can cause rashes, inflammation, itching, and other skin changes. Some types of skin diseases can be hereditary, for example: albinism, ichthyosis, which occurs in men, hypertrichosis. There are some species that are exceptionally individual. That is, as a result of mutations, a person receives few gains during his lifetime.

A medical professional often prescribes therapeutic measures depending on the analysis of the skin condition. If the data collected is insufficient, the doctor will require the child's parents to give the child tests. Of these:

- 1) biopsy of a skin sample
- 2) Tests for bacteria, fungi or viruses
- 3) A diascopy is a microscopic device that uses the skin to see how much it has changed color. the child's condition, with the help of which diagnostic documents are examined and issued
- 4) Dermatoscopy is a process that examines skin lesions using an instrument called a dermatoscope.
- 5) The canka test, which is a set of tests that diagnose a disease called herpes and conduct in-depth research on it.

The skin; the epidermis, dermis, and hypodermic layers also make up the other lower part of the skin.

Skin diseases in children and adults move from one floor to another.

And it can also leave grounded footprints, which can make the footprints more visible in the future. An accurate understanding of the mechanism of occurrence of various skin diseases, for example, very malignant tumors, made it difficult to determine their beneficial and harmful qualities until the beginning of the 20th century.

A computer, and the creation of artificial intelligence helps to find a common language with such problems.



## The Main Part

Among childhood diseases, allergic diseases are one of the most popular types. Dermatitis, impetigo, and fungal infections are common. The tenderness of the skin due to the fact that the child's immune system is not fully formed causes the spread and outbreaks of these diseases.

On the other hand, artificial intelligence is widely used in medicine, especially in the field of dermatovenerology, for image analysis, comparison of clinical trials between previous and intermediate stages of treatment and recovery. Dermatology helps to divide a child's skin into pathological and healthy using artificial intelligence technology for various burns or pathological conditions. This helps to make a diagnosis with an accuracy of 90-95%.

Oncological diseases in children are divided into 3 types, depending on the cause of their occurrence:

- 1) viruses (French scientist .A.Borrel, 1903).
- 2) chemicals (Japanese scientists K.Yamagiwa and K.Ichikawa, 1915)
- 3) radioactive substances (French scientists A. Lacassan, 1932)

Carcinogenesis of experimental, chemical, and radioactive types of malignant tumors through surgical treatment, local treatment work has been established. Ultrasound examinations, electromagnetic fields (microwave, UHF), laser light, and physical factors are widely used in the treatment of oncological diseases, but it is important that this should be done in a limited amount in children.

Today, there are a number of mobile applications and web platforms around the world that help doctors detect skin diseases at an early stage. For example, programs such as SkinVision, VisualDx, and dermai analyze the image uploaded by the user and offer possible diagnostic options. These technologies are especially effective in remote monitoring of children living in remote areas, when urgent consultation is needed.

Diseases begin with the birth of a child. There are also causes and solutions. It is enough to use only the right treatment methods. Below are their approaches to neonatological diseases. symptoms and necessary products in treatment :

- 1) atopic dermatitis (allergic skin inflammation)

This disease is very common in children.

It is mainly manifested by itching, redness, and skin rashes.

Causes: heredity, allergens (dust, food, hygiene products), mental stress.

It most often begins at an early age — before 6 months or at the age of 2-3 years. During treatment, it is recommended to avoid antihistamines, emollient creams, and allergens.

2)peeling (peeling of the skin)

5-7 days after birth, the baby's skin becomes dry and sheds a thin layer.

This is especially true in premature babies.

3) physiological erythema (neurothema neonatorum)

It is manifested by redness of the skin on the 1st-2nd day after birth.

The reason is changes in blood circulation during the transition from the environment of the mother's uterus to the external environment.

It passes after 2-3 days, no treatment is required.

Pathological diseases :

a)neonatal pustulosis (purulent rash)

Within a few days after giving birth, small bubbles of pus appear.

It is usually caused by *Staphylococcus aureus* or *Candida*.

Treatment: antiseptic solutions, if necessary, antibacterial therapy.

b)pelionitis (purulent inflammation of the skin)

Purulent infiltrates form under the baby's skin.

It occurs due to infectious diseases or lack of hygiene.

In recent years, research has been conducted in neonatal dermatology to analyze skin changes using artificial intelligence systems.

For example, artificial intelligence algorithms have an accuracy of up to 90% when distinguishing a physiological or pathological condition based on photographs of a child's skin.

These systems help pediatricians and neonatologists, especially in remote areas, with remote medical consultations.

## **Conclusion**

The newborn's skin is his first protective wall with the external environment. Any change that occurs through the skin in the first days of life provides important information about the overall health of the child. Therefore, early detection of neonatological skin diseases and the ability to distinguish them from physiological ones is a great responsibility for every doctor.



Today, the emergence of digital technologies in medicine, including artificial intelligence systems, opens up new opportunities in this area. Such systems help to detect even the slightest changes in the baby's skin, which speeds up diagnosis.

But don't forget that technology is just an auxiliary tool, and the real decision is made by a human doctor. Babies grow up healthy if science, practical experience, and affection are in harmony. Therefore, the task of every neonatologist is to combine a modern approach with a humane one, to approach it with attention and care from the first minutes of a new life.

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