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DEVELOPMENT OF HOMEOPATHIC TOPICAL OINTMENT FOR PSORIASIS TREATMENT

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Introduction. Psoriasis is a common skin condition that speeds up the life cycle of skin cells. It causes cells to build up rapidly on the surface of the skin. The extra skin cells form scales and red patches that are itchy and sometimes painful.

Psoriasis is a chronic disease that often comes and goes. The main goal of treatment is to stop the skin cells from growing so quickly. There is no cure for psoriasis, but you can manage symptoms. Lifestyle measures, such as moisturizing, quitting smoking and managing stress, may help [2].

Common signs and symptoms include: red patches of skin covered with thick, silvery scales; small scaling spots (commonly seen in children); dry, cracked skin that may bleed; itching, burning or soreness; thickened, pitted or ridged nails; swollen and stiff joints. There are several types of psoriasis, such as:

- plaque psoriasis;
- nail psoriasis;
- guttate psoriasis;
- inverse psoriasis;
- pustular psoriasis;
- erythrodermic psoriasis;
- psoriatic arthritis [5].

Psoriasis typically starts or worsens because of a trigger that you may be able to identify and avoid. Factors that may trigger psoriasis include: infections, such as strep throat or skin infections; injury to the skin, such as a cut or scrape, a bug bite, or a severe sunburn; stress; smoking; heavy alcohol consumption; vitamin D deficiency; certain medications (including lithium, beta blockers, antimalarial drugs, and iodides) [1]. The complications in people with psoriasis risk of developing certain diseases are represented in table.

Complications for people with psoriasis [3, 4]

Diseases	Complications
1	2
Psoriatic arthritis	Joint damage and a loss of function in some joints, which can be debilitating.
Eye conditions	Certain eye disorders: conjunctivitis, blepharitis and uveitis
Obesity	People with psoriasis, especially those with more severe disease, are more likely to be obese.
Type 2 diabetes	The risk of type 2 diabetes rises in people with psoriasis. The more severe the psoriasis, the greater the likelihood of type 2 diabetes.
High blood pressure	The odds of having high blood pressure are higher.

1	2
Cardiovascular disease	The risk of cardiovascular disease is twice as high as it is for those without the disease. Psoriasis and some treatments also increase the risk of irregular heartbeat, stroke, high cholesterol and atherosclerosis.
Metabolic syndrome	A high blood pressure, elevated insulin levels and abnormal cholesterol levels are increases risk of heart disease.
Other autoimmune diseases	Celiac disease, sclerosis and the inflammatory bowel disease called Crohn's disease are more likely to strike people with psoriasis.
Parkinson's disease	This chronic neurological condition is more likely to occur in people with psoriasis.
Kidney disease	Moderate to severe psoriasis has been linked to a higher risk of kidney disease.
Emotional problems	Psoriasis can also affect quality of life; associated with low self-esteem and depression.

Psoriasis treatments reduce inflammation and clear the skin. Treatments can be divided into three main types: topical treatments (topical corticosteroids and retinoids, Vitamin D analogue, salicylic acid, coal tar, moisturizers), light therapy (natural or artificial ultraviolet light) and systemic medications (oral or injected drugs) [6, 8].

External therapy is performed to reduce inflammation, peeling and skin infiltration. For this purpose, ointments, creams, lotions containing salicylic acid (2 %), sulfur (2-10 %), urea (2-10 %), dithranol (0.25-3 %), dexpanthenol, zinc pyrithione, calcipotriol, glucocorticoids are used.

Previously, from 2 to 5% salicylic acid as a part of ointments and creams was widely used for the local treatment of psoriasis. In some patients, salicylic ointment caused skin irritation, and petroleum jelly, which is part of ointments and creams, made the skin oily.

Tar and naphthalan medicines are also effective in the treatment of psoriasis and practically safe for prolonged use. They have anti-inflammatory, disinfectant and absorbable effects. Sometimes they are prescribed in combination with salicylic acid, which helps soften and remove scales, or with corticosteroid drugs for external use. Tar (wood origin and coal) is used in various dosage forms (ointment, cream, paste, shampoo) in concentrations from 1 to 30 %. The use of tar medicines is limited due to their shortcomings (unpleasant odor, dyeing of linen). While using medicines containing tar, irritation and pustular skin diseases can occur. The application of these drugs to large areas of the skin is contraindicated in kidney disease [6].

In this aspect, the use of homeopathic ointments is an effective and safe choice in the alternative treatment of psoriasis.

The **aim** of this research is to select of active substances excipients in the development of homeopathic topical ointment for psoriasis treatment.

Methods of researches. On the basis of analysis of literature data in homeopathic practice topical medicinal forms (ointments, oils, opodeldocs) based on sulphur, aloe vera, capsaicin, dead salts, oats, tea tree oil, turmeric, mahonia, sepia, graphite and others are widely used for the treatment of psoriasis [7]. Our attention

was drawn to homeopathic medicine graphite, which are effectively used in the treatment of psoriasis.

The homeopathic remedy graphite is used to treat a number of ailments, but it is a vital therapy for skin disorders, particularly weeping eczema, psoriasis etc. In homeopathy, graphite is an appropriate medication for individuals suffering from metabolic imbalance that may result in skin disorders, for instance, dry, cracked skin, psoriasis, cuts that become infected quite easily and ooze pus, keloids (elevated, scratchy scars), scar tissues that turn firm, and deformed nails wherein the nails are usually thick, cracked and distorted.

Graphite is to be used in the homeopathic treatment of individuals affected by psoriasis in which the symptoms include the presence of thickened and hardened scales on the skin, the skin is also affected by cracks and fissures which cause a great deal of discomfort. Physical symptoms also include the presence of intense itching and burning sensations [7, 9].

Graphite ointment 1 % was prepared in accordance with the German Homoeopathic Pharmacopoeia. Hydrophobic and diphylic bases (emulsion types) were used. Graphite was introduced into base by suspension type.

Results. Quality control of the obtained samples was conducted by the following parameter: appearance, odour, homogeneity, mass deviations, identification.

Conclusions. The obtained samples of ointment are testing on microbiological purity and stability while storage.

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