

The effectiveness of selected physiotherapeutic procedures for the treatment of psoriasis

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Abstract: Introduction. The aim of this study was to evaluate the effectiveness of selected physiotherapeutic procedures used in the treatment of psoriasis on the basis of the patients' subjective assessment. In this work, the following research questions were asked: 1. Do the applied physiotherapeutic procedures reduce the feeling of pain and discomfort? 2. Does the use of sulphide baths, cryotherapy and exposure to UVB lights have beneficial effect on psoriasis? **Material and methods.** The research was carried out among 52 patients with psoriatic lesions and undergoing spa treatment. Cryotherapy treatments, sulphide baths and exposure to a UVB light were used. The subjective assessment of the effectiveness of the treatments was made using a proprietary, anonymous questionnaire. The largest number of patients with psoriasis were people aged 41-49 (n = 30), patients over 60 (n = 12) and patients aged 20-40 (n = 10). **Results.** After the exposure to a UVB light, 52% of respondents indicated a symptom remission, 42% partial remission, and 5.7% did not notice any changes related to symptoms caused by psoriasis. After cryotherapy, 50% of patients experienced a significant improvement, 48% partial symptom remission, 4% did not feel any change. Sulphide baths eliminated the symptoms of the disease in 28.85% of the respondents, a partial symptom remission was indicated by 63.43%, and no improvement was indicated by 5.77% of the respondents. **Conclusions.** Physiotherapy used in the sanatorium treatment of psoriasis brings the desired effect, and the condition of the skin improved. 53.86% of people declare that the skin after sanatorium treatments is in very good condition, the discomforts have been largely eliminated, 42.30% think that the treatments used partially relieved the symptoms associated with psoriasis. Lack of changes was indicated by 3.84% of the respondents

Key words: psoriasis, physiotherapy, sanatorium treatment

Introduction

Psoriasis is an immune-mediated skin disorder that is remitting and relapses frequently. It occurs in about 1-3% of the general population and is associated with many comorbidities, including rheumatoid arthritis, cardiovascular diseases, obesity, hypertension, diabetes, inflammatory bowel disease, and thyroid diseases. It significantly reduces the quality of life and can be a cause of depression. Psoriasis is an incurable disease, however, new anti-psoriatic therapies [1,2,3,4,5,6] are constantly being developed. Among the patients

with psoriasis, 20-40% suffer from psoriatic arthritis (PsA). Joint symptoms may appear up to 10 years before the onset of skin symptoms. Early diagnosis of arthritis and implementation of treatment are key to achieving disease remission and improve prognoses. A significant percentage of patients with psoriasis who meet the criteria for inflammatory condition and remain under the care of a dermatologist do not have a joint disease diagnosed [7,8]. Almost 90% of people have psoriasis vulgaris, characterised by well-defined erythematous plaques that appear anywhere

on the body. About one third of patients have moderate to severe disease that affects more than 10% of the body surface and usually requires systemic treatment. Other clinical variations include pustular, arthropathic or guttate psoriasis, and psoriatic erythroderma. Emerging evidence suggests that different phenotypes have different immunogenetic profiles, influencing treatment choice [9].

Materials and methods

The research was carried out among 52 patients with psoriatic lesions and undergoing spa treatment. In the study group, patients received the following treatments: cryotherapy, exposure to a UVB light and sulphide baths. The subjective feelings of patients after the series of treatments were assessed on the basis of the questionnaire. The proprietary, anonymous questionnaire of the survey consisted of 18 single-choice questions. The survey was anonymous and voluntary.

Results

People aged 41-49 (n=30) constituted the largest number of patients with psoriasis. Subsequently, n=12 were people over 60 years of age and n=10 were patients aged 20-40. In terms of the period of onset of psoriasis, the majority of respondents developed the disease in their adolescence and adulthood. The number of people who developed psoriasis in adolescence accounted for 42.30% (n=22), and in adulthood for 40.40% (n=21). Psoriasis is the least common in childhood, and most frequent in adulthood. As shown by the results of studies, the disease was also present in the family in 61.54% (n=32), while in 38.64% (n=20) of relatives this disease did not occur. The results confirm that psoriasis is a genetic disease. Psoriatic lesions in 38.46% of the respondents (n=20) affected the area of their elbows and knees, in 19.23% (n=10) the scalp was affected, while 15.38% of the

respondents indicated changes on their back. The changes were accompanied by pain and wounds, which was strongly confirmed by 44.23% (n=23), while 55.77% (n=29) do not feel pain related to the disease or it is insignificant. Itching sensations in the lesions were indicated by 78.85% (n=41) of the respondents. In the study group, 76.94% of patients received physical therapy 5 times a week, the rest 4 times a week. The procedures performed included: cryotherapy, exposure to a UVB light and sulphide baths. Relief of symptoms in the form of itching of lesions was indicated by 70% (n=36) of the respondents, no improvement was indicated by 3.84% of the respondents, 26.16% felt only a slight improvement. In the assessment of the effectiveness of sulphide baths in improving the skin condition, 28.85% (n=15) declared high effectiveness of the treatments, a partial improvement was indicated by 63.43% (n=33), while 5.77% (n=3) did not feel any improvement at all. In the evaluation of the effectiveness of exposure to a UVB light, 52% (n=27) indicated relief of symptoms, 42% (n=22) indicated a partial improvement of the condition of their skin, and 5.79% (n=3) did not experience any improvement. After cryotherapy, 50% (n=26) of patients experienced a significant improvement, 48% (n=24) experienced partial relief of symptoms, 4% (n=2) did not notice any change. In the overall assessment of the effectiveness of physiotherapy used in the treatment of psoriasis, 53.86% (n=28) of the respondents declared that their skin is in very good condition, 42.30% (n=22) that it is in good condition, 3.84% (n=2) assessed that the treatments did not improve the condition of their skin.

Discussion

Research by Waszczykowska et al. [10] in the field of spa treatment of patients with psoriasis, atopic dermatitis and chronic urticaria with the use of radon-sulphide-fluoride water show an

improvement in the condition of the skin and an extension of the disease remissions. In the study by Grzybowski [11], favourable changes in the treatment of psoriasis were observed in the case of combining balneotherapy and heliotherapy, as highly mineralised brines have exfoliating effect, making the skin more sensitive to UV radiation. Kuliński et al. [12] used the exposure to the 311 nm band of UVB light and artificial sulphide-hydrogen sulphide baths for 50 patients with psoriasis vulgaris. The proceedings were on average conducted 5 times a week. Before commencing the therapy and after 15 treatments, on the basis of physical examination, the extent and intensity of psoriasis were assessed based on the PASI (Psoriasis Area Severity Index) scale. The coefficients derived from it are PASI 50, 75, 90 expressed as a percentage, meaning a reduction of psoriatic lesions by 50, 75 and 90%, respectively. After the therapy, 14 people (28%) achieved PASI 75, 16 people (32%) achieved PASI 50, and in 15 people (30%) a reduction of the index by 25% was observed. In 3 people (6%) there was a slight improvement (PASI reduction below 25%). In 2 people (4%) there was not any improvement at all. Side effects were rarely observed and were expressed as a slight erythematous reaction. A study by Berneburg et al. [13] involved 74 patients with moderate to severe plaque psoriasis. Patients were observed during the 6-week treatment and for 4 weeks after its completion. 38 patients were treated with classic PUVA and the remaining 36 patients were treated with PUVA bath. In both groups, a significant reduction in the average PASI value was obtained. During 6 weeks of therapy, a reduction in PASI by 74% was achieved in patients treated with the PUVA bath method, while in the group treated with the classic PUVA method, the reduction was 62% (from 15.3 to 5.8). However, this difference turned out to be statistically insignificant ($P=0.389$).

Conclusion

The conducted own research shows that physiotherapeutic procedures used in sanatorium treatment reduce pain and eliminate the feeling of discomfort caused by psoriasis. Sulphide baths, cryotherapy and exposure to a UVB light have a positive effect on psoriatic lesions.

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