REPORT on the results of clinical trials on a homeopathic drug, LOMA PSORIASIS,

used for the treatment of psoriasis patients.

The work was performed in the laboratory researching reparative processes in the skin at the I.M. Sechenova Moscow Medical Academy scientific research center. Responsible PhD student: Lye Ngok Z'ep Supervisor: lead investigator, Doctor of Medical Science, Professor I.Ya. Shakhtmeister MOSCOW 2000

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Introduction

Psoriasis is one of the most common dermatological diseases with an insufficiently studied pathogenesis. The wide dissemination (according to the World Health Organization, psoriasis affects 4 - 5% of the world population), the ever-increasing number of cases, the increased trend and the absence of effective methods for treating psoriasis explain the urgent need for further research on its pathological mechanisms and to search for new, more effective, side effect-free preparations for treating this illness. This is why our attention was drawn to the homeopathic preparation, Loma Psoriasis, manufactured by Loma Lux, Oklahoma, USA.

Loma Psoriasis is a natural, mineral, homeopathic medicinal product indicated for the treatment of psoriasis. The preparation contains nickel sulfate, sodium bromide, potassium bromide, potassium sulfate and zinc bromide. The main active substances are inorganic nickel and inorganic bromide. Each teaspoonful (5 ml) of the preparation contains about 1.1. mg of nickel and 23.4 mg of bromide. Inactive excipients: purified water, less than 3% ethyl spirit, 0.15% methyl paraben and

0.03% propyl paraben.

Approval for the preparation, Loma Psoriasis, was carried out in the skin diseases clinic in the laboratory researching reparative processes in the skin (lead investigator Prof. I. Ya. Shakhtmeister) at the I. M. Sechenov Moscow Medical Academy scientific research center from December 1999 until April 2000.

All the trials were carried out in accordance with a specially compiled program, agreed with the representatives of the company. Before the start of the investigation, each patient signed an informed consent form for the treatment to be carried out and in this confirmed that he was familiar with the conditions for performing the clinical trials.

Aims and problems of the trial

Aim of the research: to ascertain the efficacy, tolerance and advantages of using Loma Psoriasis for the treatment of psoriasis.

The following problems were resolved in order to achieve the aforementioned aim: the effect of taking the minerals nickel sulfate and sodium bromide orally every day in psoriasis patients for a protracted period of time was studied. The safety of taking the preparation compared with other methods of treating psoriasis was shown. The optimal pathogenetically justified plan for taking Loma Psoriasis for treating psoriasis was devised.

Preconditions and rationale

Using nickel and bromide salts as a means for treating people was revealed in medical literature as early as the 1850s. Nickel

salts were administered in doses that varied in a range up to 7.5 mg per kilogram of weight per day for 75 days, without reporting any serious negative effects. The medicinal use of nickel salts dwindled at the beginning of the 20th century, at the same time as the use of bromide salts decreased in the middle of the 20th century.

For nickel, the permissible daily dose for 7 years was established as 0.050 mg Ni/kg/day by the World Health Organization based on various trials on animals and for bromide compounds, based on trials on people, the permissible daily dose for a lifetime was established as a dose of 0.40 Br/kg/day.

The precise action mechanism of Loma Psoriasis is not yet known. However, it is presumed that including mineral salts in the composition of the preparation will help the defensive mechanisms of the body to compensate for the primary genetic biochemical deficiency. This biochemical deficiency, as is presumed, is dependent on the nickel metal-fermenting system which becomes more effective in an enriched nickel environment. Bromide has well-known anti-proliferating properties and may also have an anti-pruritic action.

Nickel sulfate dissolves and decomposes in the alimentary canal into its ionic constituents. According to the trials, up to 50% of ionic nickel is absorbed on an empty stomach. In addition, food significantly reduces the speed and level of nickel absorption. For this reason it is preferable to take the preparation in the morning on an empty stomach about 1 hour before food. The maximum serous concentration of nickel is reached approximately 2 hours after it has been taken orally. Taking 1 dose a day leads to a stable serous concentration within 7 days.

Absorbed nickel is first of all excreted in the urine and the terminal half-life is about 21 hours. Renal clearance is fast and effective and nickel does not accumulate in the body. For this reason one of the contraindications for taking the preparation is renal failure.

Sodium bromide and potassium bromide dissolve and decompose into its ionic constituents in the alimentary canal. Ionic bromide is absorbed quickly and fully from the intestine and diffuses almost exclusively in extracellular environments. Bromide is excreted by the kidneys and the terminal half life is about 11 - 12 days. Taking one dose a day leads to a stable concentration within approximately seven weeks.

This trial is designed to evaluate the efficacy and safety of treatment with Loma Psoriasis for a protracted period of time (between 8 and 12 weeks) and an 8 week post-treatment period.

Methods and conditions of the trial

The Loma Psoriasis preparation is supplied as a solution in 237 ml bottles for oral administration. The preparation is a colorless, transparent liquid. Each 5 ml of the liquid contains approximately 1.1 mg of nickel and 23.4 mg of bromide.

The preparation is contraindicated in the event of a nickel allergy, hypersensitivity to one of the constituents and in the event of kidney disease. It is not advisable to use this with children under ten, during pregnancy or breastfeeding. The preparation is taken once a day in the morning on an empty stomach about 1 hour before food.

Depending on body weight, the dose of the preparation is:

22-45 kg - 0.5 teaspoons (2.5 ml);

68-45 kg - 1 teaspoon (5 ml);

90-45 kg - 1.5 teaspoons (7.5 ml);

more than 90 kg - 2 teaspoons (10 ml);

Selection of patients

1. Inclusion criteria:

a) Patchy vulgar psoriasis, covering no less than 5% of the surface area of the body.

b) Over 12 years of age.

c) All medicinal treatments stopped 2 weeks before the start of the trial and were discontinued for the whole of the trial.

d) Women were protected against pregnancy for the whole of the trial using an effective contraception method.

e) Adequate renal function.

f) No excessive consumption of alcohol or banned medicinal substances.

g) Ability to meet the requirements listed in the informed consent form.

2. Original and subsequent inclusion criteria:

Subjects who did not satisfy the original inclusion criteria were excluded.

Characteristics of the trial subjects

Clinical trials on the efficacy, tolerance and safety of Loma Psoriasis were carried out on 20 psoriasis patients - 12 men and 8 woman aged between 15 and 60. (Table 1)

Table 1

Age	M	F
15-30	3	3
31-40	4	2
41-50	3	2
51-60	2	1
Total	12	8

The length of time subjects were affected by psoriasis varied between 1 and 35 years. (Table 2)

Table 2: Distribution of patients by length of illness

Length of illness (in years)	M	F
0-3 years	4	2
3-10 years	3	2
11-20 years	2	1
21-30 years	2	2
31-35 years	1	1

In all patients the manifestation of psoriasis on the skin was widespread. The cutaneous process was localized in them on the scalp, face, elbows, knees, torso, palms of the hands and soles of the feet, in some the nails were affected. On the torso there were papules and pink plaques with clear-cut edges, covered with silvery-white flakes, lichenization, weeping and fissures, especially behind the ears. On the palms and the soles there were distinctly delineated red plaques covered with yellowish flakes. When the nails were affected there were the

characteristic punctate pits and a small section of hyperkeratosis under the nails.

In 2 patients, as well as the skin disease, the joints were affected to a more or less pronounced extent. In 1 patient, the ankle and knee joints were affected and in 1 female patient the interphalangeal joints of the hand and the humerus joints. Clinically, in the area of the affected joints, edema and redness were observed, pronounced painful feelings and a restriction in the range of movement bothered them. X-rays revealed the appearance of osteoporosis in the region of the joint.

In almost all patients, psoriasis on the skin was at a progressive or stationary stage. (Table 3)

Table 3 Distribution of patients by diagnosis and accompanying diseases

Diagnosis	MF
Distribution of psoriasis, progressive stage	3 2
Distribution of psoriasis, stationary stage	7 4
Distribution of psoriasis, regressive stage	1 1
Distribution of psoriasis, psoriatic arthritis	1 1

Conducting the trial

1. Pre-treatment period:

Various initial investigations and laboratory trials were carried out before the start of the medicinal treatment. They consisted of filling in the standard history of the disease and the standard

physical examination, a normal urine analysis, a Nechiporenko urine analysis and, if necessary, a clinical blood analysis, a biochemical blood analysis and an immunophenotypical examination of a sub-population of lymphocytes in peripheral blood. The immunofluorescence of a previously dyed whole blood cells method was used for the trial using monoclonal antibodies of different marked fluorochromes - FTIC and phycoerythrin - erythrocite ferritin. The trial was carried out in a FACS Vantage flow cytofluorometer (USA).

In addition, different psoriasis symptoms were evaluated and the PASI indicator (Psoriasis Area and Severity Index) was determined.

Before treatment, all patients underwent a normal urine analysis and a clinical blood analysis as standard. 2 patients with psoriatic arthritis with an area of an increased erythrocyte sedimentation rate were excluded. As a result of biochemical blood tests, in the majority of those affected with psoriasis, there was an increase in the levels of cholesterol, triglycerides, bilirubin and lactate dehydrogenase.

In an examination of the sub-population composition of lymphocytes in patients affected by psoriasis, attention was drawn to the pronounced increase in the content of activated lymphocytes (CD 38) and an increase in the content of T killers in peripheral blood, suppressors (CO 8) and also an increase in T cell reactivity.

2. Treatment period:

Patients were given the medicine every day on an empty stomach about 1 hour before food. The dose was between 5 and 7.5 ml depending on body weight. Notes were made of

the history of the disease and the physical condition every week. Laboratory tests were conducted at 4 and 8 and 12 weeks during the period of active treatments. At each visit the PASI indicators and other psoriatic lesion criteria were evaluated and also any adverse reactions that took place during the treatment period. It must be noted that such events were not observed in our trial.

3. Post-treatment period:

We scheduled an 8 week observation period after treatment to check any continuing effects of the trial medicinal treatment which could continue after the active treatment period. Subjects were given exactly the same physical evaluation and PASI evaluation as during the treatment period.

RESULTS

1. Efficacy:

The following was established as a result of the treatment performed (Table 4): after just 2 weeks of treatment, patients noticed that itching had disappeared, there was a reduction in exfoliation and hyperemia of psoriatic plaques.

In 1 patient, who had stationary stage psoriasis on the scalp and smooth skin, psoriasis plaques completely disappeared.

After 4 weeks of treatment a clinical cure was noticed in 1 more patient. Significant improvement was observed in 7 patients: exfoliation decreased sharply, the process on the skin started to regress (formation of whitish pseudoatrophic edges around the psoriasis plaques). And an improvement was noticed in 9 patients - the peripheral growth of papules stopped (the

hyperemia areola around the papules disappeared).

After 6 weeks of treatment a clinical improvement was observed again - a significant improvement was observed in 2 patients and an improvement was observed in 10 male and 6 female patients.

After 8 weeks of treatment with Loma Psoriasis, a full clinical cure was observed in 3 more patients - a significant improvement - and an improvement was observed in 9 male patients and 4 female patients.

After 10 weeks of treatment, a full clinical cure was observed in 3 more patients.

A significant improvement was observed in 8 patients and an improvement in 2 patients and after 12 weeks of efficient treatment a clinical cure was observed in 4 more patients, in 5 patients, a significant improvement and in 1 patient an improvement was observed.

In all, after 12 weeks of treatment with Loma Psoriasis, we obtained the following results:

- in all, in 14 of the 20 patients the exfoliation stopped completely, psoriasis papules and plaques disappeared and in these places there only remained a greyish-brown pigmentation or depigmentation;
- in 5 patients there was an area of significant clinical improvement (exfoliation completely disappeared, insignificant infiltration of psoriasis papules remained);
- a clinical improvement was observed in 1 patient (a reduction in hyperemia and the exfoliation of psoriatic plaques, psoriatic foci started to regress); it must be noted

that this patient had progressive stage diffused psoriasis with an area of no less than 20% affected. This patient was advised to continue the course of treatment for 4 - 5 months.

Table 4. The results of treatment with Loma Psoriasis

Treatment results	Length of treatment (weeks)						Total	In 8 weeks
	2	4	6	8	10	12		
Clinical cure	1	1	2	3	3	4	14	No recurrence
Significant improvement	-	7	9	10	8	5	5	No recurrence
Improvement	12	9	6	4	2	1	1	No recurrence
Ineffective	7	2	-	-	-	-	-	-

After a course of Loma Psoriasis treatment, a pronounced trend towards the normalization of disturbed indicators of a biochemical blood analysis (cholesterol, triglycerides, bilirubin, lactate dehydrogenase) and an immunophenotic examination of a sub-population of lymphocytes in the blood (activated lymphocytes (CO 38), T-killers, suppressors (CB8), T cell reactivity) was observed although their full repair was not noted.

Clinical blood analysis indicators, normal urine analysis in all patients were within the norm.

2. Safety:

All patients tolerated the treatment well. No side effects or complications were recorded in the treatment process. Not one of the patients discontinued the treatment.

During the treatment process every 4 weeks clinical blood and urine tests were conducted for all the patients in the dynamic. No side effects were revealed in the indicators of these tests.

CONCLUSION

As a result of the clinical trials conducted on the 20 patients with diffused psoriasis it was established that Loma Psoriasis is an efficacious medicine for this pathology.

The preparation is well tolerated by patients and does not cause side effects and complications. Its use is pathogenetically justified as, according to modern data based on the pathogenesis of psoriasis, disruption of the metabolism regulation systems and metabolic changes occur.

The therapeutic efficacy of Loma Psoriasis, its good tolerance and safety in use, positively enable this preparation to be evaluated and to be recommended for widespread use in the treatment of psoriasis.

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