

Variation of Blood Biochemical Markers in Patients Diagnosed with Vulgar Psoriasis Treated with Herbal Extracts - Study

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Abstract

This paper aims to highlight the beneficial therapeutic effects of the administration of herbal extracts in patients with psoriasis, correlated with the variation of blood biochemical markers in clinical context (Roşoiu N., Verman I.G., 2008). At the same time, by analysing these parameters, we proposed to refer to the therapeutic contraindications, the diet regime and the evolution of the biological constants during and after the action of the administered therapeutic products, in correlation with the possible diseases associated with the treated disease.

Keywords: psoriasis, treatment of psoriasis, natural treatment.

Introduction

Biochemical studies of disease etiopathogenesis approach in general and chronic skin diseases in particular are a prerequisite for better understanding the mechanisms of production and support of diseases. Thus, the determination of biochemical parameters may lead us to establish new correlations between the biochemical substrate, disease occurrence and severity of symptoms, correlations to support and contribute to attain the objectives of psoriasis treatment strategy.

Material and Methods

The experiment focused on the variation of 43 biological parameters (biochemical and hormonal) in two groups of 7 patients with vulgar psoriasis, treated with two natural therapeutic products as follows:

- the first group, with the Stresclin derma capsules (two cps. per day) and Klinhaem syrup (two tablespoons per day) for 6 weeks.
- the second group, only with Stresclin derma capsules (two capsules a day) for 6 weeks.

Blood samples were collected before and after treatment, after which we performed comparative studies. The method used was to calculate the average values of the reference intervals for each investigation, to calculate the mean values of the analyses for each group in the study and then to compare them.

Reference ranges for the normal values of laboratory analyses were recorded in a table, to which we added their mean values, which were then used as a basis for calculation, by comparison with the values obtained from the patients included in the study.

For the statistical processing of the data obtained, after laboratory investigations, we produced tables containing the values of the analyses before treatment and after 6 weeks of treatment.

1. For the statistical processing of the data on pre-treatment / post-treatment differences, we used the IBM SPSS 19 software.

- We first checked whether the differences between pre-treatment and post-treatment values showed a normal distribution of data using the Kolmogorov-Smirnov and Shapiro-Wilk statistical tests. We also verified the existence of possible “outliers” (extreme individual values, very different from the others obtained within the group), which could then influence the choice of the optimal way of further data analysis.

- If following the above tests resulted in a normal distribution of data and the absence of significant “outliers”, we then applied the Student Paired Samples T-test to see if the differences between pre-test and post-test values are statistically significant. Otherwise, when either the data distribution was not normal or there were “outliers”, we applied an alternative non-parametric test, namely The Paired-

Sample Wilcoxon Signed-Rank Test.

The total amount of free radicals in peripheral blood was determined with the FORM - Free Oxygen Radicals Monitor (Complete System for Immediate Determination of Free Whole Blood Radicals).

After 7 days of treatment, the determination was repeated, and a comparison was made with the baseline values in conjunction with the clinical symptomatology.

Equipment Used

For biochemical determinations (GLU, ALT, AST, LD-P,CK, UREA,CR-S, URIC, CHOL, TG-B, HDLD, AMY 7, ALP, GGT, TBIL, DBIL, ALB, TP, CA, MG, FE, PHS, NA, K, LDL-COLESTEROL, TOTAL LIPIDS, atherogenic risk, ionized calcium) the following laboratory devices were used:

a) Beckman Coulter Synchro Analyzers (Emergency Military Hospital of Constanta).

The Beckman Coulter Synchron CX7 is a computerized automated and automated tool set designed for in vitro dosing of components and drugs in biological fluids as well as urine drug dosing.

b) Device for conducting serum protein electrophoresis (Emergency Military Hospital of Constanta).

Model SAS-MX

c) FORM Free Oxygen Radicals Monitor Device (Complete system for immediate determination of free radicals on whole blood) (Iowemed Medical Center Constanta).

a) **COBAS INTEGRA 400 plus** For the determination of serum C3 and C4 complement (Sante Clinica Constanta)

b) **COBAS e 411** (Sante Clinica Constanta)

To determine the analyzes: **ESTRADIOL, SERUM CORTISOL, PTH, PROGESTERONE**

c) **Azure Compact HPLC HPG** (Sante Clinica Constanta) ACTH and Serotonin were determined

d) **Analyzer Immulite 2000** (Clinica Provita 2000 Constanta) For determining ACTH, Free T4, TSH.

e) **Cobas 6000 Device** (Synevo Constanta Laboratory) For TSH, C-reactive protein, Estradiol, Free T4, TSH, Rheumatoid Factor, PTH

Recommended Therapeutic Products

The therapeutic product **KLINHEM**



Figure 1 KLINHAEM

Recommendations: Unique combination of plants with detoxification and improving role for skin lesions associated disorders.

Usage: oral, 5 ml twice a day.

Composition 5 ml of syrup contains:

Rubia cordifolia root extract - 612.5 mg: immuno-modulator, detoxifying.

Hemidescus indicus root extract - 612.5 mg: antitoxic, depurative, lymphatic aid, anti-rheumatic, aphrodisiac stimulant, rejuvenating.

Extract from the acacia catechum root - 612.5 mg: Peripheral vasoconstriction reduces inflammation.

Tuberous roots extract of Smilax china - 250 mg: anti-psoriatic action.

Azadirachta indica extract - 250 mg: anti-inflammatory action, general tonic.

Honey 100 mg

Tinospora cordifolia extract - 87.5 mg: immunostimulant.

Turmeric rhizome extract (Curcuma Longa) - 75 mg: removes toxins, antimutagenic, anticancer, anti-inflammatory, hepato-protective, antioxidant, healing, cholesterol-lowering. Therapeutic product **STRESCLIN DERMA**



Figure 2 STRESCLIN DERMA

Way of usage:

1-2 capsules, twice a day. The capsules are swallowed whole with a glass of water

Composition:

Curcuma longa powder - 250 mg: eliminates toxins, antimutagenic, anti-cancer, anti-inflammatory, hepato-protective, antioxidant, healing, lowers cholesterol.

Camellia sinensis extract (green tea), leaves - 70 mg: calming effects on the nervous system, fighting free radicals.

Bacopa monnier extract - 35 mg: general body toning, regeneration of the nervous system, anti-inflammatory action, antioxidant properties, protecting the body from the unfavourable action of free radicals.

Acacia catechu extract, bark - 35 mg: the astringent action reduces inflammation.

Convolvulus pluricaulis extract - 30 mg: works on the brain, the benefits being related to longevity, increased intuition and vitality, and increased concentration.

Taraxacum officinale extract (dandelion), roots - 25 mg depurative, detoxifying, soothing, sedative action.

Azadirachta indica extract, leaves - 25 mg: anti-inflammatory action, general tonic.

Ocimum sanctum extract, fruit - 25 mg: analgesic, antipyretic, anti-inflammatory, immunostimulatory.

Table 1. It is noted that the two products have three similar extracts but in different concentrations:

Active extract	KLINHAEM	STRESCLINDERMA
CURCUMA LONGA	75 mg	250 mg.
ACACIA CATECHU	612,50 mg	35 mg
AZADIRACHTA INDICA	250,00 mg	25 mg

Results and Discussions.

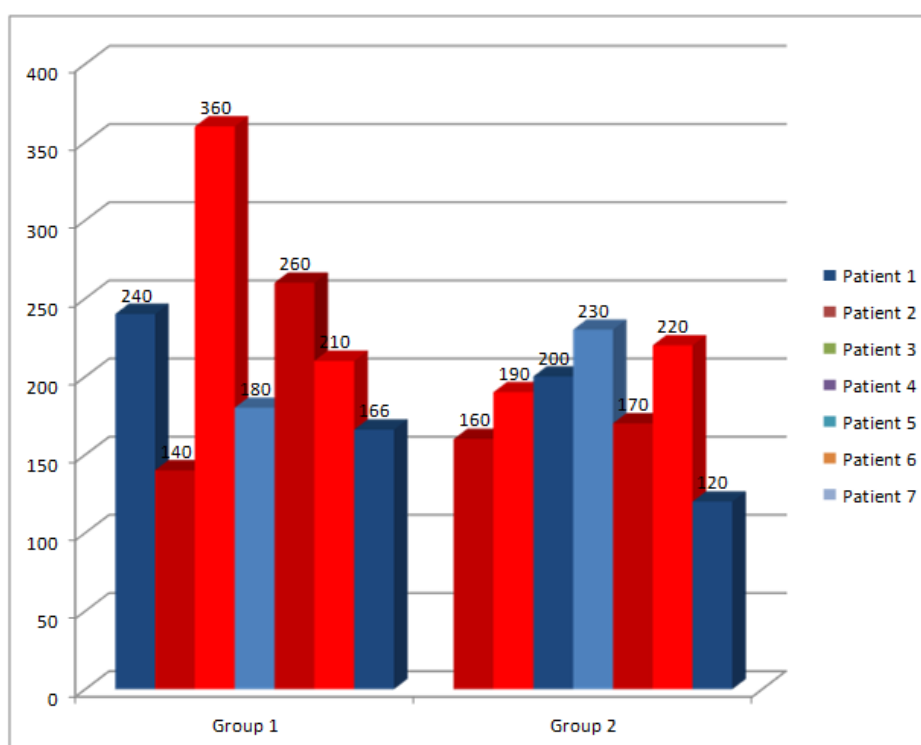


Figure 3 Initial area (before treatment) of psoriatic lesions (in cm²). Prior to treatment, the area of psoriasis affected areas varied in patients between 140 cm² and 360 cm² with an average of 203.28 cm². For group 1, the average was 222.28 cm² and for group 2, the average was 184.28 cm².

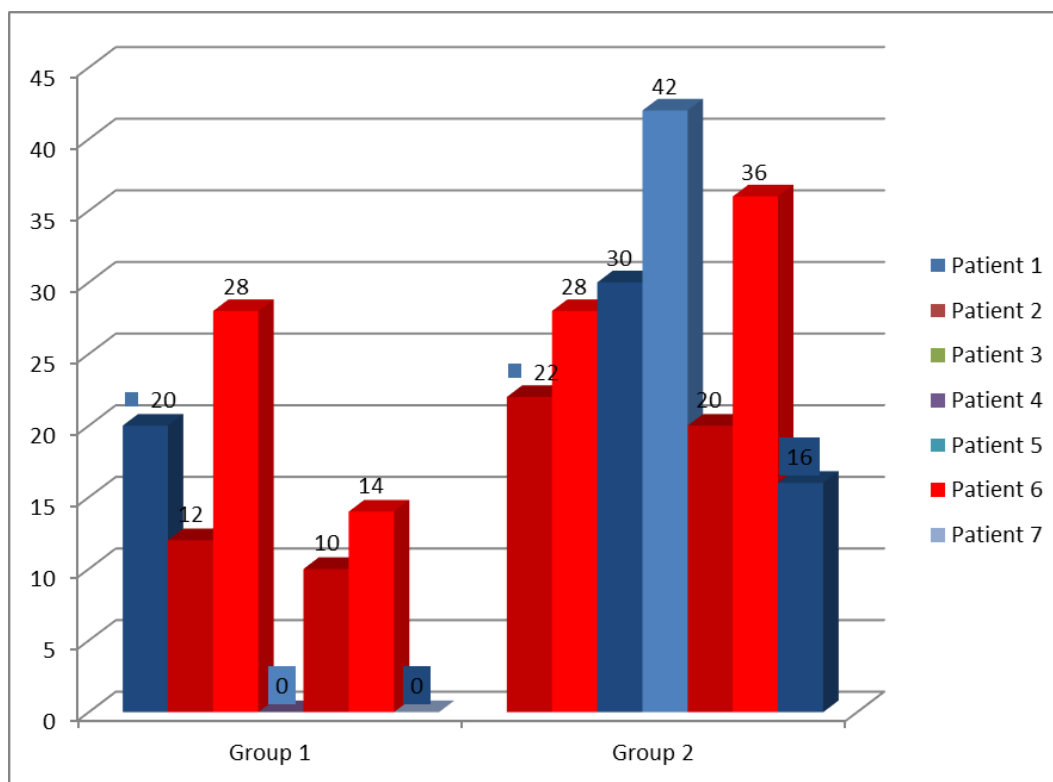


Figure 4 Residual area (after treatment) of psoriatic lesions (in cm²)

Unhealed lesions area after treatment varies between 0 cm² and 42 cm².

The average for the total of these surfaces / patient for both groups in total is 19.86 cm². The average for the total of these surfaces / patient for the first group is 12 cm².

The average for the total of these surfaces / patient for the second group is 27.71 cm².

The percentage average of the total of these areas / patient for both groups is 9.77%

The percentage average of the total of these areas / patient for the first group is 5.40%.

The percentage average of the total of these areas / patient for the second group is 15%.

Reference ranges for the normal values of laboratory analyses were recorded in a table, to which we added their mean values, which were then used as a basis for calculation, by comparison with the values obtained from the patients included in the study.

For the statistical processing of the data obtained, after laboratory investigations, we produced tables containing the values of the analysis before treatment and after 6 weeks of treatment.

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Table 2 Biochemical investigations of 14 cases of vulgar psoriasis prior to treatment

Patients Nr.		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Gender	Average value	♂	♀	♀	♂	♀	♀	♂	♀	♀	♂	♂	♀	♀	♂
Age years		43	28	53	32	51	48	42	36	63	53	58	27	28	57
Surface cm ²		240	140	360	180	260	210	166	160	190	200	230	170	220	120
GLU	90	81	82	77	90	63	83	86	75	235	78	90	72	61	88
ALT	22,5	33	24	11	28	38	46	38	9	35	84	30	13	12	19
AST	23,5	24	20	17	27	40	32	24	12	25	26	23	13	19	22
P	383	304	399	341	493	353	360	391	317	375	399	446	299	342	398
CK	106	50	223	69	85	112	94	49	81	121	109	240	42	60	54
UREE	32,5	44	29	31	52	48	42	21	19	41	23	49	17	28	36
CR-S	0,95	0,83	0,73	0,91	1,13	1,10	0,86	0,68	0,68	0,78	0,91	1,46	0,66	0,8	1,21
URIC	4,9	6,9	4,6	3,8	7,5	4,0	5,2	4,7	3,1	5,0	6,9	4,4	2,1	5,0	5,5
CHOL	175	249	220	234	233	191	237	258	178	211	318	128	187	129	232
TG-B	107,5	543	275	126	111	94,0	104	164	80	228	446	71	64	64	115
HDL	50	34,2	37,6	57,9	80,6	55,6	56,4	55,8	50,5	41,4	37,1	36,2	59,9	40,6	47,9
AMY7	75	37	58	88	51	48	62,8	43	65	43	85	133	41	76	49
ALP	62	49	51	36	70	52	48	41	34	58	32	40	39	60	36
GGT	35,5	40	19	10	87	36	38	25	10	30	34	18	12	9	16
TBIL	0,7	0,8	0,7	0,6	0,7	0,4	0,7	0,7	0,7	0,5	0,6	0,8	0,6	0,8	0,8
DBIL	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,0	0,1	0,1	0,1	0,1	0,1	0,1	0,1
ALB	42,5	46	48	40	42	46	48	42	43	43	42	47	41	45	41
TP	7,55	7,5	7,9	7,7	7,6	7,9	8,2	7,0	7,4	7,8	7,6	8,3	7,5	7,6	7,2
CA	9,45	9,6	9,8	9,8	9,7	9,3	9,2	10,0	9,7	10,1	9,7	9,9	9,5	9,8	9,9
MG	2,25	2,1	2,3	1,9	2,4	2,2	2,1	2,0	2,2	1,9	2,2	2,3	1,9	2,0	2,2
FE	115	94	81	78	99	86	110	113	166	45	74	89	73	90	100
PHS	3,55	2,5	2,3	2,9	3,4	3,2	2,8	2,9	2,3	2,0	2,4	2,3	2,4	3,5	3,4
NA	140,5	138,2	138,9	137,0	143,2	142,0	138,4	136,6	140,4	138,1	139,0	141,6	139,6	139,6	144
K	4,3	4,16	4,67	4,42	4,69	4,40	4,10	3,86	4,14	3,93	5,04	5,18	4,47	4,51	3,50
LDL.Col	75	106,2	127,4	150,9	130,2	122,4	118,6	169,4	111,5	124,0	191,7	77,6	114,3	75,6	161,1
RISC At.	2,55	7,3	5,9	4,0	2,9	4,5	3,6	4,6	3,5	5,1	8,6	3,5	3,1	3,2	4,8
CA.Ion	4,6	4,1	4,0	4,1	4,1	4,3	4,2	4,4	4,2	4,2	4,1	4,0	4,0	4,1	4,3
Albumin	57,5	52,42	55,37	50,73	53,73	51,66	54,05	54,48	52,70	51,23	53,20	54,84	53,31	55,92	55,88
Alpha 1	3,5	3,35	3,52	4,41	4,46	3,5	3,6	3,85	6,35	4,87	5,61	4,37	4,07	3,36	4,00
Alpha 2	9,5	11,83	9,85	11,49	19,49	9,48	10	10,51	10,99	11,48	11,67	7,30	7,64	9,01	8,93
Beta	12	15,92	13,99	13,10	13,51	12,78	13,27	15,01	14,95	15,10	15,43	12,30	15,18	13,35	14,98
Gamma	16,75	16,51	17,26	20,27	17,82	22,62	13,06	16,16	15,00	17,32	14,09	21,19	19,79	18,37	16,20
A/G	1,35	1,10	1,24	1,03	1,16	1,1	0,89	1,20	1,11	1,05	1,14	1,21	1,14	1,27	1,27
PTH	39	14,6	29,4	46,0	34,8	24,8	11,8	18,4	16,2	22,4	48,8	52,4	14,6	28,8	32,8
ACTH	35,25	12,6	16,8	32,4	9,3	14,0	8,83	16,6	28,2	39,8	10,16	42,4	13,8	29,4	44,30
Free radicals	275	280	310	288	260	229	550	220	268	220	300	280	288	260	280
Serotonin	170	120,4	190,3	86,8	170,9	167,2	144,5	183,6	98,6	110,8	189,7	88,4	110,3	163,3	146,2
C3 Compl.	133	88	96	110	98	102	130	109	162	86	138	116	148	164	86
C4 Compl.	36	56,3	48,2	18,9	36,8	30,5	37,6	42,3	52,4	19,7	28,3	42,8	39,6	19,8	44,3
Cortisol s.	11,55	3,8	6,4	12,6	4,4	7,4	11,4	8,2	12,8	14,2	10,6	8,4	4,8	12,8	11,4
CRP	3,05	1,22	2,40	4,8	0,82	1,44	1,60	0,96	3,60	2,46	1,22	1,66	5,64	4,32	2,14
Rheum.fct.	5	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8
Free T4	1,315	0,94	1,26	1,16	1,42	1,44	1,43	1,44	1,64	1,14	1,52	1,28	0,99	1,38	1,12
TSH	2,2	2,40	0,82	1,48	2,16	0,988	1,46	1,36	3,22	1,08	2,16	2,82	1,22	1,86	1,78

(Values above normal limits are red, and those below the limits are blue)

Table 3 Biochemical investigations of 14 cases of vulgar psoriasis after treatment

Patients Nr.	Average value	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Gender		♂	♀	♀	♂	♀	♀	♂	♀	♀	♂	♂	♀	♀	♂
Age/years		43	28	53	32	51	48	42	36	63	53	58	27	28	57
Surface/cm ²		20	12	28	0	10	14	0	22	28	30	42	20	36	16
Treatment	Sc + Kh	Sc + Kh	Sc + Kh	Sc + Kh	Sc + Kh	Sc + Kh	Sc + Kh	Sc + Kh	Sc	Sc	Sc	Sc	Sc	Sc	Sc
GLU	90	110	75	95	110	84	95	103	96	132	122	132	89	94	110
ALT	22,5	22	18	8	32	36	44	35	9	25	73	12	19	7	13
AST	23,5	24	19	15	36	38	30	24	14	25	39	14	27	17	18
D-P	383	295	393	295	480	388	420	288	307	412	433	396	295	323	307
CK	106	60	277	93	80	140	110	38	47	82	231	215	413	47	69
UREE	32,5	29	32	24	50	54	38	28	21	36	29	39	23	32	63
CR-S	0,95	0,85	0,70	0,77	1,10	1,00	0,95	0,60	0,67	0,79	1,05	1,22	0,76	0,89	1,18
URIC	4,9	6,2	5,0	3,6	7,00	5,2	5,4	4,3	3,1	6,1	7,7	3,9	2,6	6,6	6,4
CHOL	175	298	233	225	240	175	232	269	216	274	345	151	187	145	225
TG-B	107,5	853	171	83	110	127	80	158	72	270	476	92	33	64	229
HDLD	50	28,8	43,8	51,7	78,6	62,4	60,4	59,1	50,4	46,6	44,3	38,5	58,1	49,1	47,1
AMY7	75	34	52	80	48	50	75	38	69	54	83	144	48	67	47
ALP	62	43	56	33	68	58	42	36	35	49	36	39	33	52	36
GGT	35,5	55	17	11	84	48	42	24	12	34	54	20	8	8	17
TBIL	0,7	0,6	0,7	0,5	0,6	0,5	0,8	0,8	0,6	0,6	0,9	0,8	0,7	0,7	1,0
DBIL	0,1	0,0	0,2	0,1	0,2	0,1	0,3	0,0	0,1	0,1	0,1	0,1	0,1	0,1	0,1
ALB	42,5	44	48	40	45	43	45	42	41	41	45	45	43	45	41
TP	7,55	7,3	8,1	7,3	7,8	7,6	8,0	7,9	7,3	7,5	8,3	8,2	7,8	8,3	7,0
CA	9,45	9,8	9,6	9,4	9,4	9,2	9,0	9,6	9,7	9,7	9,7	8,9	9,3	9,8	9,5
MG	2,25	2,3	2,4	1,9	2,6	2,4	2,2	2,1	2,0	2,0	2,3	2,2	2,0	2,3	2,3
FE	115	44	83	75	110	92	106	130	86	49	107	83	76	118	143
PHS	3,55	3,3	3,7	3,5	3,9	4,0	3,7	3,9	2,9	2,4	3,1	3,3	2,9	3,9	3,2
NA	140,5	140,6	140	139,2	144,0	146,4	144,5	137,5	138,9	142,6	142,7	143,6	140,5	145,3	144,1
K	4,3	5,0	4,9	4,8	5,0	4,8	4,0	4,5	4,7	4,1	4,5	4,4	4,1	4,9	4,7
LDL.Col	75	98,6	155,0	156,7	140,4	136	126,6	178,3	151,2	173,4	205,5	94,1	122,3	83,1	132,1
RISC At.	2,55	10,3	5,3	4,4	3,6	5,0	4,2	4,6	4,3	5,9	7,8	3,9	3,2	3,0	4,8
CA.Ion	4,6	4,2	3,9	4,1	3,8	4,0	4,4	4,0	4,2	4,1	3,9	3,6	3,9	3,9	4,2
Albumin	57,5	53,77	52,24	54,31	52,23	47	54,22	54,14	50,37	52,13	51,15	53,10	53,20	51,01	51,23
Alpha 1	3,5	3,85	3,93	3,64	4,83	2,2	3,8	4,16	6,42	4,61	5,46	4,85	4,48	4,07	4,13
Alpha 2	9,5	12,16	9,33	10,80	20,14	12,5	10,40	10,89	11,16	11,83	12,36	7,85	8,83	10,44	9,33
Beta	12	16,40	13,9	12,7	14,23	13,1	13,10	14,74	16,18	14,33	17,23	12,77	13,86	13,52	16,19
Gamma	16,75	18,63	17,61	19,9	14,28	25,2	18,47	17,23	16,12	17,86	16,13	21,42	21,16	20,96	16,12
A/G	1,35	1,05	1,17	1,15	0,97	0,89	1,18	1,15	1,00	1,07	1,00	1,13	1,10	1,04	1,12
PTH	39	16,8	28,2	48,6	32,4	25,9	16,8	28,2	20,4	26,2	55,6	48,2	16,8	32,6	30,6
ACTH	35,25	14,80	20,60	30,2	16,4	17,41	17,4	22,6	32,3	40,2	16,2	38,6	18,4	32,8	40,20
Free Rad.	275	320	360	300	280	310	501	274	296	260	380	360	260	320	340
Serotonina	170	98,3	167,2	110,4	149,3	144,5	113,57	163,8	120,6	98,7	144,3	116,8	100,7	141,9	110,8
C3 Compl.	133	96	108	124	104	106	134	128	146	98	140	122	124	153	93
C4 Compl.	36	54,7	40,3	20,2	40,2	30	37,5	47,7	55,6	24,3	32,4	46,2	40,8	26,9	50,6
Cortisol s.	11,55	4,8	8,6	16,2	10,8	18,8	14,2	18,6	18,2	22,4	16,2	14,8	6,2	12,4	20,2
CRP	3,05	1,46	2,20	6,00	0,84	0,80	2,01	1,14	3,40	2,72	1,04	1,48	5,40	4,66	2,83
Rheum. Fact.	5	< 8	< 8	< 8	< 8	9	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8
Free T4	1,315	1,16	1,20	1,10	1,36	1,51	1,47	1,52	1,54	1,10	1,66	1,38	0,88	1,26	1,40
TSH	2,2	3,66	1,24	1,58	2,66	1,46	3,06	2,44	3,14	1,28	2,40	3,20	1,44	2,40	2,20

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Table 4 Average values of pre- and post-treatment analyses, with percentage differences

Tests	Stesclin derma + Klinhaem			Stesclin derma		
	The mean value before treatment	The mean value after treatment	Difference percentages %	The mean value before treatment	The mean value after treatment	Difference percentages %
GLU	80,28	96	↑19.58	99.85	110.7	↑10.86
ALT	31.14	27.85	↓10.56	28.85	22.57	↓21.76
AST	26.28	26.57	↑1.08	20	22	↑10
LD-P	377.28	365.57	↓3.10	368	353.28	↓4
CK	97.43	114	↑17	101	157.71	↑56.1
UREE	38.14	36.43	↓4.48	30.42	34.71	↑14.10
CR-S	0.89	0.85	↓4.49	0.92	0.94	↑2.17
URIC	5.24	5.04	↓3.81	4.57	5.2	↑13.78
CHOL	231.71	238.85	↑3.08	197.57	220.42	↑11.56
TG-B	202.42	226	↑11.6	152.57	176.57	↑15.73
HDL	45.95	54.97	↑19.63	44.8	47.72	↑6.52
AMY7	55.4	53.85	↓2.80	70.28	73.14	↑4.06
ALP	49.57	48	↓3.17	42.71	40	↓6.34
GGT	36.43	40.14	↑10.18	18.42	21.85	↑18.62
TBIL	0.66	0.64	↓3.06	0.68	0.87	↑27.94
DBIL	0.09	0.13	↑44.44	0.1	0.1	0
ALB	44.57	43.85	↓1.61	43.14	43	↓0.32
TP	7.68	7.71	↑0.39	7.63	7.77	↑1.83
CA	9.63	9.42	↓2.18	9.80	9.51	↓2.95
MG	2.14	2.27	↑6.07	2.10	2.16	↑2.85
FE	82.34	91.43	↑11.03	91	94.57	↑3.92
PHS	2.86	3.71	↑29.72	2.61	3.1	↑18.77
NA	139.18	141.74	↑1.84	140.33	142.52	↑1.56
K	4.33	4.71	↑8.77	4.40	4.49	↑2.04
LDL.Col	132.16	141.65	↑7.18	122.26	137.38	↑12.36
RISC At.	4.69	5.34	↑13.85	4.54	4.7	↑3.52
CA.Ion	4.17	4.06	↓2.63	4.13	3.97	↓3.87
Albumin	53.20	52.56	↓1.20	53.87	51.74	↓3.95
Alpha 1	3.81	3.77	↓1.04	4.66	4.86	↑4.29
Alpha 2	11.80	12.32	↑4.40	9.57	10.26	↑7.21
Beta	13.94	14.02	↑0.57	14.47	14.86	↑2.69
Gamma	17.67	18.76	↑6.16	17.42	18.53	↑6.37
A/G	1.10	1.08	↓1.81	1.17	1.07	↓8.54
PTH	25.68	28.13	↑9.54	30.85	32.91	↑6.67
ACTH	15.79	19.92	↑26.15	29.72	31.24	↑5.11
Free Rad.	305.28	335	↑9.73	270.85	316.6	↑16.89
Serotonin	151.5	135.3	↓10.6	129.61	119.11	↓8.10
C3 Compl.	104.71	114.29	↑9.14	128.57	125.14	↓2.66
C4 Compl.	38.65	38.66	↑0.02	36.27	39.54	↑9.01
Cortisol s.	7.74	13.14	↑69.76	10.70	15.77	↑47.38
CRP	1.89	2.06	↑8.99	3.00	3.07	↑2.33
Free T4	1.30	1.33	↑2.30	1.30	1.32	↑1.53
TSH	1.52	2.3	↑51.31	2.02	2.29	↑13.36

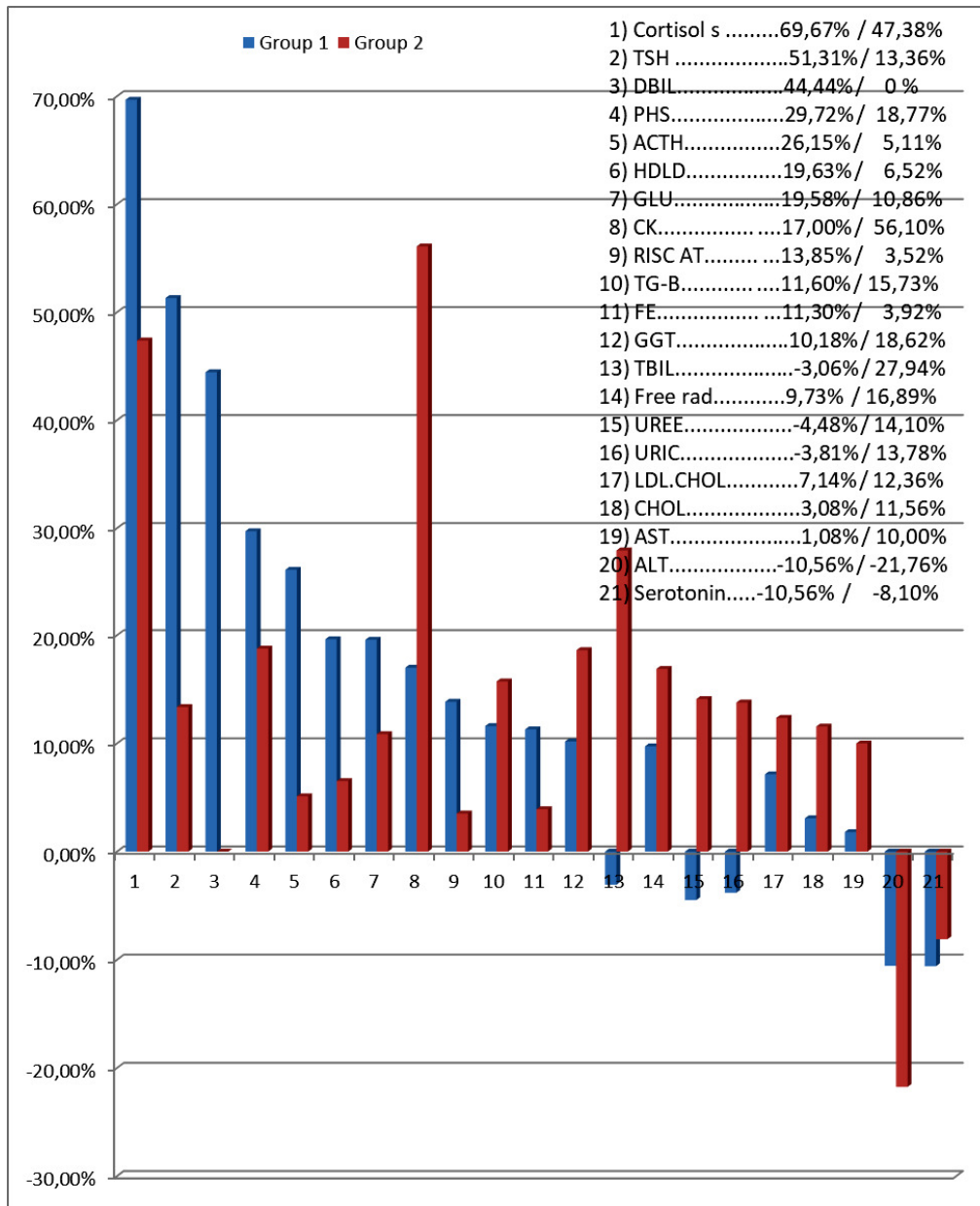


Figure 5 The variations in mean percentages of post-treatment analyses exceeding the mean values of 10% over the pre-treatment averages

Following the application of IBM SPSS Statistics 19, significant results were obtained for some markers in Stressclin Derma in the single variant and in combination with Klinhaem.

Conclusions:

The statistical analysis of the results of laboratory investigations performed in the two groups of patients after 6 weeks of treatment reveals the following significant increases or decreases:

- A) In group 1 (treated with Stresclin Derma in combination with Klinhaem),
increased: - ACTH, C3, Cortisol s., DBIL, GLU, K, LDL Col., MG, NA,
PHS and TSH.
- B) In group 2 (treated with Stresclin Derma),
increased: - Alpha 2, CHOL, Compl.C4, Cortisol s., Gamma, PHS,
Free rad., TSH.
decreased: - A/G, ALB, CA.
- C) Statistical differences of results, a comparison between group 1 (dermis treated with Stresclin in combination with Klinhaem) and group 2 (treated with Stresclin Derma):
increased: - ACTH, Alpha 2, CHOL, Cortisol s., DBIL, MG, NA, PHS,
PTH, Free rad., TSH, Gamma.
decreased: - ALT, CA, CA .Ion, LDL.

As a result of the study of the variation of the mentioned values, the following can be stated:

The associations between psoriasis and these criteria of biochemical parameters have been repeatedly quoted in the international medical literature (Lupu M. et al., 2014).

- In the treatment of vulgar psoriasis, the natural therapeutic studied products can be recommended: Klinhaem and Stresclin Derma.

- The mechanism of action is mainly that of stimulating release of endogenous cortisone.

- Avoid recommending these products to patients who have associated dysmetabolic diseases: diabetes, liver diseases, or endocrine disorders with metabolic implications.

- Given the increasing rate of Ritis (AST / ALT), calculated before and after treatment, from the mean values of the two groups of patients (in group 1 increased from 0.84 to 1.05 and in group 2 increased from 0.69 to 0.97), even though it did not exceed the threshold of 1.33, it can be said that the treatment administered gives some degree of improvement in liver function.

- Hepato-protective drugs will be recommended during the therapeutic periods (Silimarin, Hepato protect, etc.)

- Patients will be monitored biochemically and hormonally throughout the treatment, and if changes occur, the therapeutic doses will be reduced or

suspended until normal. Being a chronic inflammatory disease with both cutaneous and systemic damage, it becomes absolutely necessary to control its activity, which has the consequence of reducing cardiovascular and metabolic complications (Boehncke S., 2010).

References

- Boehncke W-E et al., EADV preceptorship: advances in dermatology, JEADV (2010), 24 (suppl 5), 2-24.
- Lupu M., et al., Hiperleptinemia Şi sindromul metabolic la pacienţii cu psoriazis, Dermatovenerologie (2014), Vol.59, Nr.2, 87-100.
- Roşoiu N. şi Verman I.G., Biochimie Clinică, Editura Muntenia (2008).