



Stichting Ziekenzorg Westelijke Mijnstreek

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Bechterew Study 1998

OSTEO SPONDYLOSIS

In a double-blind study, 2 groups of Bechterew patients were investigated.

→ Group A

24 patients

10 men aged between 40 and 73 yr.

14 woman aged between 46 and 72 yr.

→ Group B

30 patients

15 men aged between 44 and 69 yr.

15 woman aged between 39 and 74 yr.

A total of 54 patients were treated medically and serologically over a 5-month period. Of the 54 patients, 42 were found during chemical laboratory tests to have positive HLA B 27 in their serum. The diagnosis of Bechterew's Disease was clear in all patients clinically, radiocally and from their case histories.

HLA - B 27		Total
Positive	Negative	
42	12	54

The following blood parameters were investigated:

- Total protein
 - APh
 - GGT
 - ALAT
 - TP
 - Albumins
 - CRP
 - RF
 - IgA
- ALAT
- Uric acid
- Urea
- Creatinine
- Urea
- BSE
- Leucocytes



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The patients received questionnaires in which they documentes the following parameters:

- Use of medications
- Pain
- Stool (quality and quantity)
- Weight
- Sleep
- Sense of well being
- Mobility

In 30% of cases, at the beginning of the examination there was an active inflammation during medical episodes. From a radiological point of view, 60% of the test subjects were found to have typical „kissing spine“ phenomenon of the lumbar spine and parts of the thoracic spine. Furthermore, in 35% of cases there were radiological symptoms of osteochondrosis and spondylarthritis. In 55% of cases the effaced and ankylosed sacro-iliac joints were conspicuous. 15% of patients reported that they had pain in the hells at night-time. 75% of those examined had restricted mobility.

Preconditions for treatment

During treatment, regular pharmaceutical drug therapy was continued. The patients also received regular physiotherapy to maintain their mobility.

The following standard classes of pharmaceutical drugs were used regularly on all test subjects.

- Analgesics
- Steroid and non-steroid anti-inflammatories
- Hypnotic drugs



Therapy

Group A

In addition to the well-known treatment, Group A inhaled twice daily for 30 minutes. Inhalation was done both mornings and evenings. At the beginning of treatment the test subjects were serologically and clinically examined by the doctor who was treating them. During the first week the patients were seen 3 times and questioned, then they were seen once a week.

At the beginning of treatment the laboratory values were recorded for all the test subjects. Further laboratory tests were done after 2, 4, 6, 10, 15 and 26 weeks.

The patients were asked to answer 15 questions regularly every 7 days. The questions concerned their lifestyle and quality of life both in everyday life and during exertion or stress. In addition, their use of pharmaceutical drugs, any pain that occurred, their sleep habits and mobility were regularly recorded.

Group B

Almost the same parameters applied to Group B. Unlike Group A, there was no inhalation with the Breathing Air Activation System.



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Results

Group A

In Group A there was a clear reduction in the use of analgesics after 3 weeks. In almost cases the ibuprofen dosage of 800 mg 3 times per day was able to be lowered to 200 mg. In 2 out of 24 test subjects the maintenance dosage of 800 mg 3 times per day was continued.

83% of those treated in Group A reported that their pain was clearly reduced.

Ibuprofen			Total number of test subjects
Lowered	The same	Raised	
22	2	0	24

Laboratory

		2	4	6	10	15	26	
IgA	n = 24	24	24	24	24	24	24	20 of 24 individuals IgA
	$\bar{X} = 6,9$	6,1	5,7	5,0	5,3	5,4	5,3	
	sd = 1,4	1,2	1,0	1,0	1,1	1,2	1,1	
GGT 0 - 50 u/l	n = 24	24	24	24	24	24	24	20 of 24 individuals IgA
	$\bar{X} = 53$	44	35	30	32	33	32	
	sd = 10	8	9	7	8	8	7	
ALAT 0 - 40 u/l	N = 24	24	24	24	24	24	24	20 of 24 individuals IgA
	$\bar{X} = 56$	50	40	30	32	33	32	
	sd = 14	14	10	9	8	8	9	

The other lab parameters were almost the same.

Leucocyten	n = 24	24	24	24	24	24	24
	$\bar{X} = 9,4$	8,0	7,0	6,4	6,3	6,8	6,4
	sd = 1,9	1,7	1,4	1,3	1,2	1,4	1,3



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Group B

With conventional treatment there was no significant reduction in pharmaceutical drugs. 2 out of 30 patients increased their dosage of analgesics on a short-term basis. Only 7 out of 30 patients (23%) were able to reduce their dosage of pharmaceutical drugs at times.

Ibuprofen			Total number of test subjects
Lowered	The same	Raised	
7	21	2	30

Laboratory

		2	4	6	10	15	26	
IgA	N = 30	30	30	30	30	30	30	25 of 30 individuals IgA
	$\bar{X} = 6,9$	6,1	5,7	5,0	5,3	5,4	5,3	
	sd = 1,4	1,2	1,0	1,0	1,1	1,2	1,1	
GGT 0 - 50 u/l	N = 24	30	30	30	30	30	30	25 of 30 individuals IgA
	$\bar{X} = 53$	44	35	30	32	33	32	
	sd = 10	8	9	7	8	8	7	
ALAT 0 - 40 u/l	N = 24	30	30	30	30	30	30	25 of 30 individuals IgA
	$\bar{X} = 56$	50	40	30	32	33	32	
	sd = 14	14	10	9	8	8	9	

The other lab parameters were almost the same.

Leucocyten	N = 30	30	30	30	30	30	30
	$\bar{X} = 10,1$	9,2	7,0	8,4	8,5	7,2	7,8
	sd = 2,1	1,9	1,4	1,8	1,9	1,7	1,6



Conclusion

Group A

The mobility of 21 out of 24 patients (88%) was noticeable better after 2 weeks and continued to increase. After 10 days, 20 out of 24 patients (83%) clearly suffered less pain and slept better. 22 out of 24 patients (92%) reported a clear improvement in their quality of life after 2 weeks.

Values as a %	Better	The same	Worse	Total
Mobility	88	12	0	100
Pain	83	17	0	100
Sleep	83	17	0	100
Pain at night time	91	9	0	100
Quality of life	92	8	0	100
Pharmaceutical drugs	92	8	0	100
Laboratory values	83	17	0	100

Group B

Only 6 out of 30 patients (20%) changed their anagesic treatment of 800 mg of ibuprofen 3 times per day to 400 to 600 mg 3 times per day. A slight decrease in the liver enzyme IgA was only observed in 5 out of 30 patients (17%).

The mobility of 7 out of 30 patients (23%) increased with conventional treatment after 4 weeks. 5 out of 30 test subjects (17%) reported that after 3 weeks that had less pain, and better, more refreshing sleep. 6 out of 30 (20%) of patients reported that an improvement in their quality of life after 3 weeks.

Values as a %	Better	The same	Worse	Total
Mobility	23	52	25	100
Pain	17	67	16	100
Sleep	73	27	0	100
Pain at night time	30	60	10	100
Quality of life	50	40	30	100
Pharmaceutical drugs	20	67	13	100
Laboratory values	17	73	10	100