

FEMALE INFERTILITY: A STUDY OF PHYSICAL TREATMENT BY THE METHOD OF L. MOJZISOVÀ FOR FUNCTIONAL DISTURBANCES OF THE PELVIC REGION

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SUMMARY

Of 166 women suffering from some type of functional infertility 118 were followed up. They were divided into 5 groups. Group A and (later) group E were treated and trained according to the method of Mojzisoová. The method consists of mobilisation techniques, post-isometric relaxation, and soft tissue techniques. Treatment lasted for 6 months. The number of women successfully treated was significantly higher in those who were treated by the method of Mojzisoová as compared to the controls.

Keywords: *Female infertility, functional disturbances of lumbar spine and pelvic ring, mobilisation techniques, post-isometric relaxation.*

The success rate of the method of treatment of Mojzisoová for female sterility due to functional pelvic disturbance was tested at the rehabilitation unit of the University birth clinic of Brno.

The study period lasted from June 1987 to June 1989. Following a project by Ph Dr. E. Franková the treatment was performed by a female physiotherapist who has been trained by L Mojzisoová.

MATERIAL AND METHOD

The study population consisted of a group of 166 women who had been referred for medical rehabilitation of infertility which had been treated unsuccessfully for an average of 4 years. Suitability for the study was assessed with the aid of a questionnaire filled in by a gynaecologist. The following criteria were applied:

- Age between 22 and 30 years
- Normal quality and quantity of sperm of partner
- Patency of fallopian tubes

The women were randomly allocated to groups A, B or C. Furthermore groups D and E were made up, details of which will be considered in a later section. Treatment was scheduled on a monthly basis for 10 women at a time from groups A, B, and C. The same was repeated for the following months.

At the rehabilitation unit the women were:

- informed about the effect of the methods of rehabilitation,
- given further information regarding the treatment routine (temperature measurements, fluid intake, necessity to perform exercises twice daily, etc.);
- examined by the female physiotherapist for: posture, pelvic distortion, leg length, pressure sensitivity of vertebrae and costosternal joints, rib fixations and muscle tightness, signs of hypertonicity of the pelvic floor musculature, etc.);
- gynaecologically examined by Dr. J. Navratilová.

The success of treatment (pregnancy) was determined as described below:

- Number of women treated successfully in group A following the treatment and exercises of Mojzisoová.
- Number of women treated successfully by a different therapeutic regime and different exercises (group B).
- Number of untreated women in group C who did not follow an exercise regimen.

GROUP A (n=50)

In this group women were treated by the method of Mojzisoová, which specifically included treatment of the lumbar spine and pelvis. Both areas have a close association with sexual organs.

Method of treatment 1-4

1. Stretching and relaxation of lumbar and pelvic musculature, postisometric relaxation (PIR) buttock and pelvic floor muscles as well as strengthening of muscles of the chest. Exercises were explained to the women on their initial visit and instructions were given to perform these at home twice daily for the following 4-6 weeks.

2. In the first half of the menstrual cycle the female physiotherapist also:

- relaxed pelvic floor muscles: after initial warm-up PIR, internal rectal massage and coccygeal treatment were performed.
- Following this, mobilisation of hypomobile areas in the sacroiliac joints, lumbar spine, and ribs was performed.

- The home exercise program was checked and corrected. Furthermore additional exercise with the purpose of strengthening pelvic floor, buttock and abdominal muscles were prescribed.

During the course of the next menstrual cycle the last two points were repeated. Relaxation of pelvic floor musculature was only performed if clear indication of hypertonicity existed. If, for whatever reason (illness, holidays), one of the women missed a treatment, this appointment was delayed to the next menstrual cycle. The course of a treatment ended after 6 visits and was considered successful if a pregnancy occurred in this study period.

GROUP B (n=50)

For this group a different set of active and passive exercises was performed than that of group A (designated 'non-genuine' exercises in the following text). Care was taken so that these exercises did not affect the areas involved in Mojziso \acute{v} a's method. The women were blinded to the fact that the exercises were non-effective.

This group also differed from group A with respect to the organisation of check-up examinations at the rehabilitation department. During the two year study period Mojziso \acute{v} a's method was already well known even among laymen. Due to technical difficulties it was impossible to completely separate the two groups in waiting rooms and corridors so that it was possible for the women to discover differences between prescribed exercises and treatments. Therefore monthly check-ups of group B were organised in small groups in advance. This allowed the creation of an isolated group. The goal of this group was to prevent information about treatment in group A to become known to other subjects.

These conditions lead to other unforeseeable differences:

- Missed appointments could not be re-scheduled and were missed completely
- Due to monthly group meetings the women were able to develop relationships, talk about their experiences with the treatment and some women only attended to announce their pregnancy.

The above conditions put group B into an advantageous position as compared to women in the other groups who attended check-ups individually.

In accordance with group A the treatment of group B consisted of the following:

- Active "non-genuine" home exercises (4 weeks)
- monthly group meetings not taking into account timing of menstrual cycle. Firstly home exercises were repeated and secondly "non-genuine" passive exercises were performed individually. These meetings took place six times and were deemed successful if pregnancy occurred in that period.

GROUP C (n=50)

This group did not exercise although the initial talk and gynaecological examination were the same as for the other groups. Date and time of the next appointment were negotiated so that the women knew that treatment was merely delayed by six months.

The purpose of this group was to exclude the possibility of a psychological effect on the number of pregnancies due to expectation of treatment. The observation period was also six months and positive outcomes were pregnancies which occurred between the initial examination and before commencement of treatment.

GROUP D (n=16)

Due to timing difficulties it was impossible to integrate this group into group B.

Treatment consisted of active home exercises which were not checked regularly by the medical rehabilitation unit. Also passive exercises ("non-genuine", group B) were not performed.

Although the treatment period was only three months, the results are of interest and will therefore be discussed. Pregnancy within three months of commencing exercises was designated as success.

GRUPE (n=76)

Women in this group were those who did not become pregnant after performing either 'wrong' exercises (groups B and D) and those who did not exercise at all (group C). Treatment lasted six months and followed Mojziso \acute{v} a's protocol (group A).

These women therefore were not disadvantaged, but treatment and possible following pregnancy were merely delayed by six months. This is in agreement with medical ethics.

Again treatment was concluded after 6 check-ups and success was described as pregnancy during treatment period.

RESULTS

Results are shown in table 1. It can be clearly seen that the success rate was significantly higher in those women treated with Mrs. Mojziso \acute{v} a's method (groups A and E) as compared to those who were not (groups B to D). In the light of these results it would be interesting to compare effectiveness of this method with other reflex therapeutic protocols (mobilisation techniques, acupuncture, reflexology, massage). Statistical analysis was performed by Dr. V. Nov \acute{a} k and RN Dr. H. Koukalov \acute{a} .

STATISTICAL RESULTS

The χ^2 -test was used for statistical analysis taking into account the number of pregnancies in individual groups. Firstly an overview table will be shown (table 1).

In table 1 $\chi^2=13,543$ which correlates with $p<0.01$. The number of pregnancies is therefore in statistically significant relation to treatment in individual groups. Since results of groups B, C and D are similar, success rates of these three groups were established in the same way, yielding a $\chi^2=0.012$ which correlates with $p>0.975$ i.e. the groups are almost identical. For this reason these groups were summarised into one group, which was compared to groups A and E (table 2).

In table two $\chi^2=12.179$ correlating with $p<0.0005$, and in table three $\chi^2=9.262$ correlating with $p<0.005$.

There is a highly statistically significant relationship between pregnancies and treatment method insofar as groups A and E showed higher numbers of pregnancies than groups B, C, and D.

Comparison of groups A and E showed $\chi^2=0.503$ ($p>0.45$). This signifies that treatment in these two groups did not differ statistically.

DISCUSSION

A larger group of patients was treated by Mojzisořa's method subsequently, giving further information about the typical symptoms and signs of this group of people with infertility. Typical symptoms other than infertility were: painful menstruation, menstruation bleeding with clots, dyspareunia, back pain and headache. On examination the following were frequent findings: bad posture with scoliosis, sacroiliac dysfunction, asymmetrical intergluteal line, weakness of the caudal third of the gluteal muscles with insufficient contraction of both the gluteal muscles and the levator ani: reflex spasm and/or tenderness of the adductors, of the coccyx, of the sacroiliac joints, of the

lumbar erector spinae, of the lower part of the abdominal wall between the umbilicus and the groin, all usually on the right, and between the umbilicus and the anterior iliac spine usually on the left.

The success rates for pregnancy in this larger uncontrolled group, according to age group, was:

- ages 20-24: 46.58%
- ages 25-29: 40.94%
- ages 30-34: 30.96%
- ages 35-39: 24.73%
- ages 40-44: 11.11%

CONCLUSION

Statistical analysis using the χ^2 -test showed a statistically significant higher proportion of pregnancies in groups A and E, which were treated and exercised following Mojzisořa's protocol as compared to (control) groups B, C and D. There was no significant difference between the number of pregnancies when comparing groups A and E.

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TABLES

Group	Number of women at start of trial	Not present	Treatment incomplete	Pregnant prior to treatment	Not included in analysis	Actual number of women treated	Number of pregnancies	Percentage successful treatments (%)
A	50	6	2	4	3	35	12	34.3
B	50	9	3	3	1	34	3	8.8
C	50	8	3	-	2	37	3	8.1
D	16	-	3	1	-	12	1	8.3
E	76	-	11	-	3	62	17	27.4

Table 1 – Trial results

Group	Number of treated women	Number of pregnancies	Non-successful treatments	Pregnancies
A	35	12	23	34.3
B+C+D	83	7	76	8.4
Sum	118	19	99	16.1

Table 2 – Overview of statistical results A

Group	Number of treated women	Number of pregnancies	Non-successful treatments	Pregnancies
E	62	17	45	27.4
B+C+D	83	7	76	8.4
Sum	145	24	121	16.6

Table 2 – Overview of statistical results E