

Treatment of torture victims – a longitudinal clinical study

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Abstract

Aim: To look at the effect of physiotherapy as part of the multidisciplinary treatment of torture victims.

Methods: Monitoring of an extended, personally designed, multidisciplinary treatment of 21 torture victims, earlier exposed to both physical and psychological torture, over nine months with assessment of outcome.

The physiotherapy comprised elements such as massage, exercise on land, balance training and stimulation of proprioception, all aiming at regaining body awareness. Effect of treatment was measured using the fibrositis index.

Non-parametric statistics using the Wilcoxon test was applied.

Results: Prior to treatment the median score of the fibrositis index was 15 points (range 2-34). After nine months of multidisciplinary treatment the median score of the fibrositis index was 2

points (range 0-15). This decrease in experienced muscle pain was statistically significant ($p < 0,0001$).

Conclusion: A high percentage of the torture victims in our study suffered from fibromyalgia prior to treatment. A multidisciplinary treatment involving individualised physiotherapy and psychotherapy had a significant effect on musculoskeletal pain in torture victims. Following nine months of treatment, only one torture victim in our study could be classified as suffering from fibromyalgia when applying the fibrositis index.

Key words: torture, diagnosis, physiotherapy, effect of treatment

Introduction

Torture is unfortunately an increasing problem throughout the world and, according to Amnesty International, government-sanctioned torture is verified in more than 100 countries.¹ Torture is known to have long-term physical and psychological effects on the victims.²

In 1980, Danish medical doctors started to diagnose and carry out treatment and rehabilitation of torture victims who had come to Denmark from various parts of the world, and in 1984 the International Rehabilitation and Research Centre for Torture Victims, RCT, was opened. At this centre essential treatment principles for torture victims were developed.

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Torture may be characterized as physical and/or psychological; most commonly victims have been exposed to both forms of torture. As a consequence hereof, the treatment specially designed for torture victims is a combination of psychotherapy and physiotherapy, commonly known as multidisciplinary treatment.³ Since the 1980s Denmark has been known for developing various forms of active treatment aimed at torture victims. In an earlier paper we have described the examination methods used when dealing with torture patients.³ Furthermore, a characteristic finding important for the present study is that torture victims are known to have widespread generalised pain.⁴ A way of measuring this type of pain is applying the fibrositis index, which is used to diagnose fibromyalgia.⁵

The aetiology of fibromyalgia is partly unknown. The diagnosis is based on a set of criteria where pain all over the body for more than three months is the main concern.⁵ Not all patients showing widespread pain fulfil the fibromyalgia criteria.⁶ Furthermore the criteria are solely based on symptoms, and this opens the possibility of having a set of subgroups, all showing the same symptoms. The symptoms in these subgroups may have different origins, one of which could be torture.

Multidisciplinary treatment of torture victims is a lengthy procedure,⁷ so it is important to look at the obtained effects of this expensive treatment, which involves various health professionals. The data presented here come from a longitudinal study where the health state of torture victims was monitored prior to and following treatment. Our aim was to see if a multidisciplinary treatment had a beneficial effect on the experienced pain from the musculoskeletal system in a group of torture victims.

The hypothesis behind the treatment

is that the physiotherapy directed towards improving and regaining body awareness, in conjunction with psychotherapy, will improve the victims' muscle pain.

Material and methods

Participants

Twenty-one torture victims, all men, with an average age of 32 years (range 20-48 years) participated in the study. Each victim was regularly examined over a nine month period by an experienced rheumatologist from RCT. Prior to this examination, RCT's psychotherapist had taken a detailed anamnesis concerning the imprisonment and torture methods that each victim had been exposed to.

The torture victims were mainly from Latin American countries and from the Middle East (Table 1).

Torture history

The victims included in the study had lived in Denmark for an average of 2.6 years (range one month to ten years). Only one of the victims spoke Danish. Therefore, interpreters at the RCT assisted during the examination of the victims. Registered physical torture methods from the group studied were as follows: Blows delivered unsystematically and systematically, physical and sexual torture, electric shock torture, suffocation torture, water torture, burns, pharmacological torture, torture of teeth, mutilations, and physical exhaus-

Table 1. Place of origin of the torture victims in this study.

| | Number |
|---------------------------|--------|
| The Middle East | 8 |
| Europe | 5 |
| Latin America | 7 |
| Africa | 1 |
| Total | 21 |

Table 2. Forms of physical torture and number of studied victims exposed to these.

| | Number (21) | % 100 |
|--|----------------|----------|
| Blows (beaten up) unsystematically applied | 19 | 90 |
| Blows systematically applied (e.g. falanga) | 8 | 38 |
| Electrical torture | 14 | 67 |
| Exhaustion | 7 | 33 |
| Suspension torture | 10 | 48 |
| Water torture | 8 | 38 |
| Sexual torture | 4 | 19 |
| Submarine torture | 5 | 24 |
| Mutilations | 3 | 14 |
| Torture against teeth | 3 | 14 |
| Burns | 2 | 10 |
| Pharmacological torture | 1 | 5 |
| Total | 21 | 100 |

tion. All had been exposed to a mixture of psychological and physical torture methods. Table 2 gives details of torture methods and exposure.

All victims had been exposed to sleep deprivation for several days and nights, having had nothing to eat or drink, and having had to relieve themselves in their clothes. The physical exhaustion of the victim had been combined with an attempt to create a psychological breakdown by exposure to deeply humiliating situations.

Physical assessment

The physical examination was focused on changes to the joints, ligaments, bone and muscle tissue. Changed joint mobility, sequelae of breaking of bone, tendonitis, bursitis and the tearing of ligaments were registered (published elsewhere³). The muscle tissue was examined for pain using the fibrositis index.⁸

This index is based on a regional palpation of eight regions of muscle groups and has a maximum score of 24 points (worst case scenario). The index in our study was

modified by adding four extra regions, the masseter and the temporalis regions, giving a maximal score of 36. We registered the modified fibrositis index from each victim twice, prior to and right after nine months of treatment.

Psychological assessment

A psychotherapist examined the clients at the start and had initial consultations with each victim individually twice a week. Later on they met once a week over the nine months of treatment.

Treatment

The principles of the multidisciplinary treatment were described by Bloch & Høhne together with recommendations for how to design individual physiotherapy courses for each torture victim.⁷

During the nine months of treatment, all patients had psychotherapy treatment alongside the physiotherapy, initially twice a week, later once a week.

The physiotherapy always focused on the victim's main pain problems. The course of treatment was planned by the physiotherapist and the rheumatologist together; taking the torture the victim had been exposed to into account. The most important factor was to create a "safe" situation and to avoid creating a situation or position that might be felt as an imitation of the torture situation.

As soon as a relationship of trust was created between the patient and the health professionals, heat treatment and massage became possible to carry out. This treatment was aimed at making the victim able to cope with being touched during treatment. Once the possibility for further physiotherapy was established, relaxation and breathing exercises as well as posture-awareness exercises were added to the programme. Following this, other more specific treatment methods

became possible. The treatment programme was individualised according to the torture the victims had been exposed to.⁷ The final step in the treatment programme was further rehabilitation with the inclusion of fitness training with aerobic exercises like cycling and occupational therapy adjusted to each person's need.

The psychotherapy also was designed to suit each victim and was adjusted to meet the needs of each individual as the treatment progressed. All through the course, physiotherapist and psychotherapist cooperated closely on the treatment programme.

Statistics

The Wilcoxon matched pairs signed ranks test for related samples was used for statistical comparisons between groups.⁹ A p-value of < 0,05 was considered statistically significant.

Ethics

These studies were in accordance with the Helsinki Declaration 1983.

Results

All torture victims completed the study, and all reported results include the whole study group.

Diagnoses

The diagnoses of the victims are shown in Table 3.

81% of the victims fulfilled the criteria for fibrositis/fibromyalgia, and 52% showed regional muscle pain.

57% had abnormal joint mobility and 10% showed sequelae after torture provoked bone fractures. Headache was another great pain problem and was found in 67% of the victims. Other less frequent conditions are also reported in Table 3.

Table 3. *Diagnoses.*

| | Number (21) | % 100 |
|--|----------------|----------|
| Artralgia and osteoarthritis | 2 | 10 |
| Abnormal joint mobility | 12 | 57 |
| Subluxatio carpo-metacarpalis 1 dxt. | 1 | 5 |
| Fracture of the spine, thorax or nose | 3 | 14 |
| Fracture of the extremities | 2 | 10 |
| Tendinitis | 5 | 24 |
| Fasciitis plantaris pedis | 4 | 19 |
| Hyperkyphosis thoracalis. | 3 | 14 |
| Regional muscle pain | 11 | 52 |
| Fibrositis syndrome/ fibromyalgia | 17 | 81 |
| Cephalagia | 14 | 67 |
| Bruxism. | 1 | 5 |
| Hemiparesis after torture | 1 | 5 |
| Infections after torture | 2 | 10 |
| Prolapsus disci i.v. lumb. | 1 | 5 |
| Total | 21 | 100 |

Effect of treatment

In this study we focused on the effect of the treatment programme on muscle pain and the extent of this pain measured by the fibrositis index. The victims were diagnosed as fulfilling the fibromyalgia criteria using the fibrositis index. The results for all victims included in this study are shown in Figure 1. Prior to treatment, the median score of the fibrositis index was 15 points (range 2-34). Following nine months of multidisciplinary treatment, the median score of the fibrositis index was 2 points (range 0-15). This decrease in experienced muscle pain was statistically significant ($p < 0,0001$).

Discussion

Our results show that a remarkably high number of the torture victims in this study fulfil the fibromyalgia criteria when applying the fibrositis index (81%). It is obvious that this has to be taken into account when designing a treatment programme.

Chronic persistent pain is known in

torture victims.¹⁰ It is also known that widespread pain does occur after injuries,¹¹ in particular cervical spine injuries.¹² One possible cause of fibromyalgia could be repeated overloading of the muscle tissue, creating microtraumas in the muscle tissue. Muscle tissue is damaged when exposed to blows causing release of muscle component. Myoglobinaemia and myoglobinuria may be found immediately after torture of the blow type, but one never gets the opportunity to measure this.

We do know, however, that torture vic-

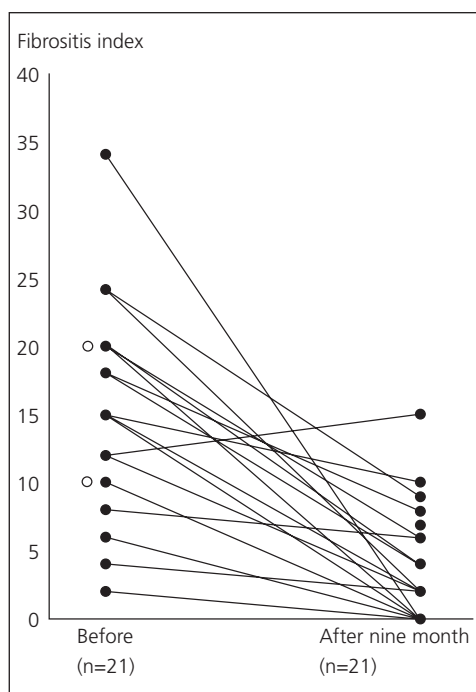


Figure 1. The modified "Fibrositis index" recorded prior to and right after completion of a multidisciplinary treatment programme. Each graph shows an individual victim. Two graphs show overlap between two individuals. Prior to treatment: Median 15 (range 2-34) After treatment: Median 2 (range 0-15).

tims have been admitted to military hospitals for treatment of kidney stop after severe blows, and many torture victims have described that they had red urine following torture (medical history from client assessments at RCT). This may very well be due to myoglobinuria. At the RCT, elevated myoglobin in plasma or myoglobinuria has never been seen, but these tests are usually carried out months or years after torture has ceased. We would therefore not expect to see this phenomenon.

For future purposes, when possible during the examination of torture victims immediately after torture, we advise to test for myoglobin in blood and urine to be able to verify torture and its sequelae. A further study of muscle damage in torture victims is not ethically possible if biopsies are needed. Only if non-invasive methods, like MRI or ultrasound, are used can changes in muscle tissue be studied.¹³

Recent studies of pain perception in chronic pain patients show that exposure to extended pain may change a person's pain perception: pain is remembered, and any pain stimuli will be perceived as amplified.^{14,15} Torture victims are known to suffer chronic persistent pain,¹⁰ and part of their pain perception may very well be due to a changed perception of pain.

In the present study we do find that fibromyalgia seen in torture victims has been successfully treated using a multidisciplinary approach, and all but one of the victims showed significant improvement of the fibrositis index at the end of the treatment period. To our knowledge, this finding is new. Our individualised treatment scheme accounted for the victims' different backgrounds and experiences, and since this is known to be necessary when dealing with torture victims,¹⁶ it explains the excellent effect of our specific treatment approach.

We did not measure the psychological wellbeing of the victims in this study. Another longitudinal study of tortured refugees with posttraumatic stress disorder exposed to a multidisciplinary treatment, Carlsson et al,¹⁷ did not see any improvement in mental symptoms or in life quality. This study differs from ours in the degree to which the torture victims received the full multidisciplinary treatment scheme. Only 70.9% of participants in the Carlsson study¹⁷ received both physiotherapy and psychotherapy, while the rest only received psychotherapy. The programme did not seem to be as individualised as the one applied in our study. The focus in the Carlsson study was also mainly on mental health. The physiotherapy part combined with the psychotherapy may therefore be of great importance for the beneficial effect of the treatment.

In our study the physical and psychological treatment was extensive and these two elements were always in close connection. The treatments lead to an improvement of the victims who experienced less pain in the musculoskeletal system.

Today, there is no known cure for the fibromyalgia patients generally seen in the rheumatology clinic. The findings from the treatment of torture victims give hope to other fibromyalgia sufferers. If one subgroup, like torture victims, responds to treatment, other subgroups may be defined which could respond to a similar more individualised specific treatment. Future studies ought to focus on different subgroups of patients with chronic widespread pain, as well as on early treatment of these.

Our conclusion is that a high percentage of torture victims in the study group suffered from fibromyalgia prior to treatment. A multidisciplinary treatment involving individualised physiotherapy and psychotherapy had a significant effect on musculoskeletal

pain in torture victims. Following nine months of treatment only one torture victim in our study could be classified as suffering from fibromyalgia when using the fibrositis index.

Apart from the implications for torture victims, this multidisciplinary treatment may also have implications for future treatment of fibromyalgia patients in general.

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