SHOULDER PAIN, IMPINGEMENT SYNDROME AND TRAUMA IN TORTURE SURVIVORS

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ABSTRACT

OBJECTIVES: Torture has been a common practice used by security forces in many countries, including Turkey. Most traumatic torture methods are beating, hanging by the arms and feet, falaka, electric shock, and positional traumas. Shoulder pain is quite common in torture survivors, particularly in the chronic period. This study aims to present cases with torture history and shoulder pain, and discuss about the causes attributed to torture trauma.

METHODS: Human Rights Foundation of Turkey (HRFT) provides health care and consulting services to torture survivors. In this study, among 1094 people admitted to the HRFT, Istanbul between 2003 and 2006, 18 cases with shoulder pain were evaluated. Soft tissue pathologies regarding shoulder pain are discussed. Socio-demographic features; torture, detention and prison history; other signs, symptoms, and diagnoses are evaluated. This is a case series analysis.

RESULTS: 12 of the cases are men, 6 are women. Mean age is 38.2±8.6. 11 cases were diagnosed as impingement syndrome, 7 as supraspinatus tendinitis, 2 as frozen shoulder, and 2 as brachial plexus injury sequel. Comorbidity with some other painful diseases and psychological disorders are also discussed. All common torture methods were experienced by the cases. Hanging by the arms, electric shock, beating, cold and pressurized water, and positional traumas are particularly common.

CONCLUSIONS: Impingement syndrome and tendinitis are common causes of acute and chronic shoulder pain in torture survivors. Overstretching and overloading the shoulder joint, particularly by hanging and positional trauma are the main factors.

I- INTRODUCTION

Shoulder pain is quite common in torture survivors. Overstretching, blunt traumas, and overload can cause chronic lesions, including impingement syndrome and tendinitis in the soft tissues, and joints of shoulder complex. (BURAYA DE LISA YA DA BONICA)

Torture has been a common practice used by security forces in many countries, including Turkey. Amnesty International reports that torture and ill-treatment committed by security forces, police and other state authorities are documented in 102 countries[1]. The World Medical Association's Declaration of Tokyo (1975), which proscribes physician involvement in torture, defines torture as following:

"[Torture is] the deliberate, systematic or wanton infliction of physical or mental suffering by one or more persons acting alone or on the orders of any authority, to force another person to yield information, to make a confession, or for any other reason (Preamble)."[2]

Severe pain and suffering (either physical or mental) is an integral part of torture. Many torture methods aim at both, and create some specific traumatic outcomes, which are normally not seen following the other traumatic events (such as accidents, street fighting, etc.). Perpetrator uses specific tools and sometimes sophisticated process to afflict the victim as much as possible, and leave as less trace as possible.

Most traumatic physical torture methods are beating and other blunt traumas, suspension (hanging by the arms and feet, including Palestinian hanging or *strappado*), other positional tortures (such as wheel torture, crucifixion on the floor or extended shackling), falanga or *bastinado* (beating the bare soles), electric shock (alone or combined with suspension), pressurized cold water, other cold and ice applications, excessive physical activity, burning and sexual assault. Also blindfolding, death threat, mock execution, sleep deprivation, extended solitary confinement and other psychological methods cause severe psychological stress[3,4].

Particularly suspension, either alone or combined with electrical shock, and other positional and blunt traumas creates severe overstretching and overload in the joints, muscles, ligaments, and other soft tissues[5]. Shoulder complex, especially rotator cuff tendons, acromioclavicular joint, capsule, brachial plexus and surrounding muscles can easily be injured[6].

This study aims to present cases with torture history and shoulder pain, and discuss about the causes attributed to torture trauma.

II - METHODS:

Human Rights Foundation of Turkey (HRFT) is an independent non-governmental organization. It has been established by the human rights defenders in 1990. Studies at the HRFT have been carried out in the light of international conventions. Its head office is in Ankara in addition to four offices established also in Istanbul, Izmir, Adana and Diyarbakır[7].

Main focuses of HRFT are prevention of torture and treatment and rehabilitation of the torture survivors. Documentation of human rights violations, publications on the rights and freedoms, reporting activity on torture cases and legal assistance, mounting campaigns, training activities and conducting scientific researches are the other fields on which HRFT has been working.

HRFT provides health care and consulting to torture survivors. HRFT Treatment and Rehabilitation Centers are affiliated members of International Rehabilitation Council for Torture Survivors (IRCT).

Total 10,786 torture survivors had been admitted to HRFT Treatment and Rehabilitation Centers in Ankara, Istanbul, Izmir, Adana and Diyarbakır between 1990 and 2006. General practitioners, psychiatrists, physiatrists, physiotherapists, and social workers have been working in the Centers as professional staff or volunteers.

Major fields of medical work in HRFT Treatment and Rehabilitation Centers are psychiatric treatment (psychotherapy, psychopharmacotherapy), counseling, and pain management. Exercise, manual therapy, electrotherapy, massage, medication, local trigger point and intraarticular injections are among the therapeutic approaches used in pain management of torture survivors in the Centers. HRFT Centers has also been working as a referral center for other specialized medical care.

294 of 1094 torture survivors who were admitted to the HRFT, Istanbul Center between 2003 and 2006 had been evaluated by staff physiatrist. Among those 294, total 18 cases were diagnosed as having painful shoulder pathology, namely impingement syndrome, supraspinatus tendinitis, frozen shoulder, or brachial plexus injury.

Those 18 cases were presented in this study. Basic socio-demographic features, torture and prison history, shoulder pathologies, and other signs, symptoms, and diagnoses are being evaluated. This is a case series analysis.

III - RESULTS

1- Demographics:

Basic socio-demographic features of 18 cases with shoulder pain are summarized in Table 1.

Table 1 – Basic socio-demographic features of cases with shoulder pain (N=18)

Sex	12 men (66.7%), 6 women (33.3%)
Age	Interval: 24-52; Mean ± SD: 38.2±8.6
Marital status	11 single (61.1%), 4 married (22.2%), 3 divorced (16.7%)
Education (graduate)	1 (%.6%) illiterate, 2 (11.1%) literate, 5 (27.8%) primary school,4 (22.2%) high school, 3 (16.7%) secondary school, 3 (16.7%) university
Jobs	14 (77.8%) unemployed, 2 (11.2%) worker, 1 (5.6%) housewife, 1 (5.6%) university student,

2- Admission, Detention and Torture History:

a- Year of admission: All cases were admitted to HRFT Istanbul Treatment and Rehabilitation Center between 2003 and 2006. Half of the cases (9 cases, 50%) were admitted in 2004, and consequently 6 cases (33.3%) in 2003, 2 cases (11.1%) in 2005, and 1 cases (5.6%) in 2006.

b- Year of detention: 8 cases (44.4%) were detained after 2000, 10 cases (55.6%) were between 1991 and 2000.

c- Cause of detention: 15 cases (83.3%) had been detained because of political accusation, 2 cases (11.1%) of asylum seeking, and 1 case (5.6%) of a petty offence.

d- Duration of last detention: 2 cases (11.1%) stayed in custody in 16-30 days, 5 cases (27.8%) in 8-15 days, 4 cases (22.2%) in 5-7 days, and 7 cases (38.9%) in less than 96 hours.

e- Time between torture and admission: 7 cases experienced torture (38.9%) more than 10 years before admission, 7 cases (38.9%) in 4-9 years, 3 cases (16.7%) 6 months before, and 1 case (5.6%) 1 week before admission.

f- Place of torture: 15 cases (83.3%) were tortured in police centers, 2 cases (11.1%) in military bases, 1 (5.6%) in the street.

g- Prison history: 17 cases (94.4%) stayed in prison after the last detention and torture. Patient stayed in prison between 5 and 180 months. Mean time of confinement (±SD) was 78.1 ± 58.2 months.

h- Torture methods: All common torture methods were experienced by the cases. Psychological traumas such as insult, blindfolding, death threat, mock execution, excessive solitary confinement, etc were often seen. Physical torture methods were also commonly used. All cases (100.0%) were experienced beating and blunt trauma. Electric torture were experienced by 11 (61.1%), suspension by 12 cases (66.7%). All the cases that were tortured by suspension, experienced simple suspension, but 9 cases also experienced Palestinian hanging (*strappado*). Frequency of major physical torture methods are shown in Table 2.

Table 2 – Most commonly used physical torture methods among cases with shoulder pain (N=18)

Torture Methods	**Frequency**	**% among cases**
Beating and blunt trauma	18	100.0
Suspension	12	66.7
Electric shock	11	61.1
Pressurized cold water	11	61.1
Sexual assault	7	38.9
Other positional torture	7	38.9
Falanga (*bastinado*)	6	33.3
Cold torture	4	22.2
Excessive physical activity	4	22.2

3- Pain History and Shoulder Pathologies:

a- Symptoms and duration: All cases complained shoulder pain. 16 of the cases (88.9%) had unilateral, 2 (11.1%) had bilateral shoulder pain. 4 cases (22.2%) had also excessive shoulder joint ROM limitation.

Most of the cases were chronic. In 4 cases (22.2%), complaints started more than 10 years before they were admitted. In half of the patients (9 cases, 50.0%) complaints started in 1-9 years, in 4 cases (22.2%) 1-12 month, and in 1 case (5.6%) 1 week before.

b- Shoulder pathologies: The most frequent disease in shoulder cases is impingement syndrome (11 cases, 61.1%). Supraspinatus tendinitis and subacromial-subdeltoid bursitis are also commonly seen (5 cases, 27.8%) The list of observed pathologies in the cases with shoulder pain is shown in Table 4.

Table 4 – Distribution of shoulder pathologies in the cases with shoulder pain (N=18)

Shoulder pathologies	**Frequency**	**% among cases**
Impingement syndrome	11	61.1
Supraspinatus tendinitis and subacromial-subdeltoid bursitis	5	27.8
Frozen shoulder (adhesive capsulitis)	2	11.1
Brachial plexus injury	2	11.1
Supraspinatus tendon rupture	1	5.6
Acromioclavicular osteoarthrosis	1	5.6
Calcified supraspinatus tendinitis	1	5.6
Bone edema in capitis humeri	1	5.6

c- Other musculoskeletal symptoms and diagnoses: There are musculoskeletal and pain symptoms and pathologies other than shoulder pain in these cases. These are lumbar disc herniation, cervical disc herniation, temporomandibular dysfunction syndrome, myofascial pain syndrome, osteoarthrosis, and fracture sequels.

4- Psychiatric Evaluation:

10 of 18 cases had been examined by staff psychiatrist in the HRFT Istanbul Treatment and Rehabilitation Center. 2 of those 10 cases did not express any specific psychological complaints. The major symptoms and findings in other 8 cases are following:

Intense psychological distress at exposure to stimuli associated with the trauma, response of intense fear, helplessness or horror to the traumatic events experienced or witnessed (both in 4 cases, 22.2%), anxiety, memory impairment, irritability and outburst of anger (in 2 cases, 11.1%), concentration difficulties, sleep disturbance, hypervigilance, fatigue, depressive affect, recurrent and intrusive distressing recollections of the traumatic event, and flashback experiences and acting or feeling as if the traumatic event were recurring.

5 of 8 cases had one psychiatric diagnosis (Table 5).

Table 5 – Psychiatric disorders of the cases with shoulder pain (N=18)

Disorders	**Frequency**	**% among cases**
Chronic Post Traumatic Stress Disorder (PTSD)	2	11.1
Acute Post Traumatic Stress Disorder (PTSD)	1	5.6
Panic disorder	1	5.6
Other mood disorders	1	5.6

5- Treatment and Outcome:

Treatments which were applied in the Center by physiatrist and physiotherapists to the patients with shoulder pain are shown in Table 7.

Table 7 – Treatment options applied to the cases with shoulder pain (N=18)

Treatment	**Frequency**	**% among cases**
Exercise (mobilization and strengthening)	17	94.4
Medication (analgesics and myorelaxants)	14	77.8
Electrotheraphy (TENS, EMS, Ultrasound, Heat)	10	55.6

Outcome of the treatments are several. 5 patients (27.8%) were cured, 5 (27.8%) were partially cured after few weeks of treatment. Treatment of 8 patients were interrupted and not completed.

IV- CONCLUSION

1- Literature about the shoulder pain and specific shoulder pathologies due to torture trauma is very limited. Only some observations that were not published in the peer-review journals are mentioned in reports and books. However, it is quite reasonable to relate severe physical trauma, particularly suspension, with lesions in the shoulder complex.

2- In this study, blunt trauma, suspension, and electric shock are seen as common torture methods experienced by the patients. Since impingement syndrome and other pathologies are also seen in those cases, the possible relationship between these physical torture traumas and shoulder pathologies can be argued. But since any control group (cases without shoulder pain) is not available in this series, no analyses were done.

3- Most of the cases in this study were admitted to our Center very long period of time after torture, mainly because of their long prison histories following detention and torture. This finding reveals that the shoulder pathologies can still be seen at the later stage after torture trauma.

4- Suspension can hurt all the soft tissues in the shoulder complex, including nerve fibers, since an excessive force of stretching is being applied. Also suspension and electric shock are being combined many times, in order to create more afflictions. Suspension by the tied wrist, with excessive extension and internal rotation of both shoulders (Palestinian suspension), results more strain and damage in the soft tissue of shoulder. Brachial plexus injury also commonly seen, but very few cases give positive EMG findings in the long-term.

5- Shoulder pain and impingement syndrome as a consequence of torture trauma, and particularly suspension, should be recognized by physicians, and more studies are needed for an evidence based clinical approach.

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