



Pain from torture: assessment and management

Kirstine Amris^a, Lester E. Jones^{b,c}, Amanda C de C. Williams^{d,*}

Abstract

Introduction: Survivors of torture are for many reasons at particularly high risk for inadequate assessment and management of pain. Among the many health problems associated with torture, persistent pain is frequent, particularly pain in the musculoskeletal system. The pathophysiology underlying post-torture pain is largely unknown, but pain inflicted in torture may have profound effects on neurophysiology and pain processing.

Methods: A narrative review of assessment and treatment studies, informed by clinical experience, was undertaken.

Results: The clinical presentation in survivors of torture shares characteristics with other chronic primary pain syndromes, including chronic widespread pain. Unfortunately, such pain is often misunderstood and dismissed as a manifestation of psychological distress, both in specialist psychosocially oriented torture services and in mainstream health care. This means that pain is at risk of not being recognized, assessed, or managed as a problem in its own right.

Conclusions: The available research literature on rehabilitation for torture survivors is predominantly targeted at mental health problems, and studies of effectiveness of pain management in torture survivors are lacking. Rehabilitation is identified as a right in the UN Convention on Torture, aiming to restore as far as possible torture survivors' health and capacity for full participation in society. It is therefore important that pain and its consequences are adequately addressed in rehabilitative efforts. This article summarizes the current status on assessment and management of pain problems in the torture survivor.

Keywords: Rehabilitation, Trauma, Refugee

1. Introduction

The scope of the IASP Global Year Against Pain in the Most Vulnerable focuses on 4 patient groups identified as being at particularly high risk for inadequate assessment and management of pain: children, older adults, individuals with intellectual and developmental disabilities, and survivors of torture and war. Those who have experienced torture are vulnerable to ongoing social and health threats even when, through escape or rescue, they find relative safety. Although removed from the immediate threat of further torture, the psychological and physical impacts of torture continue, along with new burdens associated with displacement, through “temporary” encampment—often for many years—to resettlement into sometimes hostile host communities. They can find themselves vulnerable again in a foreign culture, without work or any connection to the

Key Points

Clinicians are key in identifying torture survivors in mainstream health care and ensuring that post-torture pain and its consequences are recognized, assessed, and adequately managed.

community and preoccupied with concern for those lost or remained behind, even with persistent guilt for having fled.

Among the health and wider social, legal, and welfare problems associated with torture, persistent pain and pain-related disability have long been recognized as defining features.^{9,34,57} Unfortunately, both in specialist psychologically oriented torture services and in mainstream health systems, such pain is often misunderstood and assumed to be predominantly a nonspecific symptom related to, or in some way produced by, psychological disturbance such as chronic or complex post-traumatic stress disorder (PTSD) or other trauma-related problems, depression, or chronic anxiety.⁵⁸ The effect is that, although multidisciplinary team psychosocial rehabilitation of torture survivors has long been the gold standard in most specialized torture services,^{20,22} there is no consensus on how pain and pain-related disability are effectively managed as an integral part of rehabilitation. Overemphasizing the importance of psychological problems may result in insufficient recognition of the need for medical assessment and explanation of the pain, and of attempts to treat it.

Reflecting this gap in knowledge, the available research literature on rehabilitation for survivors of torture is predominantly targeted at mental health problems, PTSD in particular, without specific reference to pain or its importance in causing distress

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^a The Parker Institute, Copenhagen University Hospital, Bispebjerg-Frederiksbergaug, Copenhagen, Denmark, ^b Health and Social Sciences Cluster, Singapore Institute of Technology, Singapore, Singapore, ^c Judith Lumley Centre, La Trobe University, Bundoora, Australia, ^d University College London, London, United Kingdom

*Corresponding author. Address: University College London, London, United Kingdom. E-mail address: amanda.williams@ucl.ac.uk (A.C.de.C. Williams).

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and disability.^{37,58} Studies addressing pain and effectiveness of pain management in survivors of torture are largely lacking.^{5,22,49}

2. The infliction of pain and suffering

Torture can be described as a deliberate action by a public official, or officially assigned person, to inflict severe pain or psychological distress on another person. The putative purpose of this may be to get information, including confession, but it serves as punishment, to coerce others, and to intimidate the wider community (UNHCR 1987).

In most cases, the person is exposed to a combination of forms of torture, physical and psychological. Representations of torture in media often involve physical methods intended to cause pain; other methods include threats to life, such as asphyxiation and near drowning. In some cases, strategies are chosen because they inflict pain but leave no visible marks or deformity after acute tissue damage is healed. The head, palms, lumbar region, and soles of the feet (ie, *falanga*) are common areas targeted in systematic beatings, and stabbing, cutting, and burning of skin are also employed. Passing electric current through the body including the genitals is widely documented, as well as sustained forced postures and suspension of the body by extremities, commonly by the arms extended behind the back. Sexual assault including heterosexual and homosexual rape is also used as a form of physical torture, and like other physical methods lead to lasting psychological impacts on the survivors.^{12,26,34,39,47}

Methods that aim to cause severe and prolonged psychological distress may less obviously elicit pain but achieve their outcomes through extreme bodily stress. Some torture strategies that aim for exhaustion and debility include withholding food and water, extremes of cold and heat, sleep deprivation, social isolation, and confinement in small spaces. Monopolization of perception is another strategy: it involves controlling the environment, so that the person receives only sensory information dictated by her/his captor, eg, high-pitched sound, bright light. Other psychological methods target not just the person but their family or other prisoners. This may take the form of death threats or mock executions, or survivors may have witnessed, or been forced to participate in the torture, murder, or rape of other prisoners or family members.^{12,26,34,39,47}

National and regional variations in torture practices are reported, including geographical differences in the use of specific torture methods.^{26,47} Such knowledge is of value in documenting alleged torture, adding to the validity of the statement.

3. The clinical presentation in survivors of torture

Research suggests that when refugees present with chronic pain and psychological distress, the possibility of torture should be suspected.^{13,43} Experience of torture is strongly associated with poor mental health,³⁸ and torture survivors will often report symptoms of traumatic stress, which can be associated with signs and symptoms of major depression and generalized anxiety.^{6,21,30,51} Sleep disturbances and nightmares are common as well as reduced cognitive functioning, including impaired memory and concentration. Torture survivors often describe being less tolerant and more irritable in social and family contexts, and their normal roles in these contexts are impaired by loss of work, community, and culture. They will frequently describe a negative sense of self, characterized by shame and often with feelings of guilt and low self-esteem. Women in particular, but also men, may have a gender-specific anxiety or fear.^{9,16}

However, torture history should still be considered in refugees with chronic pain who do not manifest psychological distress.

Estimation of the prevalence of post-torture pain in non-selected populations, and knowledge about the natural course of pain, is not available. Existing data are derived mainly from descriptive studies in highly selected populations and rarely focus on pain experience. Studies of torture survivors from specialized documentation and/or rehabilitation centers consistently report a high prevalence of persistent pain, with overall estimates as high as 83%.^{34,36,57} Although one study comparing survivors seen within 2 weeks of torture with those seen later indicated some spontaneous resolution of pain,¹¹ a follow-up study of survivors in Denmark showed increased prevalence of chronic pain over the intervening 10 years.^{11,35}

Pain in the musculoskeletal system is frequent and can be associated with neurological complaints and sensory disturbances. Body parts where pain is commonly felt include the head,^{2,30} the feet,^{12,26,35} the joints,²⁶ and the spine and pelvic girdle^{11,30,47}; widespread pain is also frequent^{2,26} as are visceral (cardiovascular, respiratory, intestinal, and urogenital) symptoms. These may or may not relate to the type or nature of the torture the survivor experienced.

The best described associations between pain and exposure to specific torture methods are the association between pain in feet and lower leg and impairment of gait after *falanga*,^{3,12,40–42} headache after beating to the head,³⁰ pain in the shoulder girdle and reduced shoulder function after suspension by the arms,⁴⁶ and sexual assaults and low back pain, pelvic girdle pain, and urogenital symptoms.^{32,46,57} Other physical examination findings could be described as evidence of an overactive protection system, not specific to the torture events and some not uncommon in other persistent pain populations. These examination findings include increased muscle tone and tenderness in muscles, especially in muscles such as upper trapezius, pectoralis major, piriformis, and iliopsoas (which can be considered predominantly postural or tonic muscles), but also muscles such as *teres major* and the gluteals (which are generally considered phasic). Restrictions in range of movement in peripheral joints and throughout the spine can be related to muscle restriction, guarding or protective postures that have been learned over time and now occur below the level of awareness or conscious control. The prevalence of fractures related to physical torture ranges from 4% to 27%, predominantly in ribs and the upper and lower extremities.⁴⁷

It is important to note that discussions of signs and symptoms have a cultural framework that may need adjustment. The health-related consequences of torture are likely to be influenced by many interrelated internal and external factors, including cultural meaning of torture, cultural meaning of symptoms and illnesses, the social context before, during, and after torture, as well as culturally determined community values and attitudes. For this reason, one should not assume that torture has the same outcome in different individuals and in different sociocultural settings. Furthermore, diagnosticians need to be cautious in applying westernized notions of health and well-being that often ignores the collectivist or other practices of non-Western cultures.²⁵ Standard diagnostic categories may be less helpful in these cases: for example, it has been argued that the concept of PTSD fails to incorporate contextual factors, particularly the social, cultural, and political dimensions of the torture experience, and that it fails to capture the meaning of suffering for the individual person or family.¹

4. Pathophysiology of post-torture pain

Interactive models of pain emphasize neurobiological as well as environmental circumstances as an explanation for the development of persistent pain states.⁷ These models are tailored toward explanations for persistent pain and musculoskeletal pain that develops long after apparent injury. In populations whose members have not been subjected to torture or major trauma, pain persistence is predicted primarily by pain severity in the onset phase, particularly where there is nerve injury (postsurgical pain), and by psychological and social factors, effectively risk in some form.^{23,24} Systematic studies addressing risk and protective factors associated with the development of persistent pain after torture are lacking. However, pain is inflicted in torture often under conditions of extreme and prolonged stress that may have profound effects on neurophysiology and the processing of pain. Anxiety about the cause of pain, about its persistence, and about a future disabled by pain all impinges on the experience and capacity to cope.⁵³ All these risk factors are highly represented in the torture situation, with no reliable access to protective factors such as social support or health care, including analgesia. On this basis, the very high prevalence figures for persistent pain, in a mostly young adult population, are more explicable.

Although our current understanding of post-torture pain is limited, careful documentation and studies of survivors are beginning to establish connections between some forms of torture and persistent pain, better described by mechanism than by site.

4.1. Nociceptive mechanisms

The pain associated with physical forms of torture can be explained using nociceptive mechanisms. Immediate post-torture pain may be related to the inflammation response, which sensitizes tissues and lowers thresholds of mechanical nociceptors to support the healing process, but also from deformity caused by swelling or fracture or dislocation. In subsequent months and years, the contribution of nociceptors to pain may be reduced to the mechanics of an uncorrected deformity or less likely reinjury. Of course, conditions not directly related to torture may develop, including arthropathies. This reinforces the need for a thorough musculoskeletal assessment to identify poorly managed past injuries and their postural and movement consequences, as well as new pathology or disease.

4.2. Neuropathic pain

Neuropathic mechanisms are likely to be evident after various methods of torture, including strangulation, suspension, and traction. There is also risk to nerve tissue with dislocation and fracture or where peripheral blood flow might be impeded, for example, when bound or handcuffed, and when forced to remain in sustained, including loaded, postures. Neuropathic pain syndromes have been described in torture survivors based on clinical presentation: neuropathic pain due to partial lesion of the brachial plexus after suspension by the upper extremities; partial lesion of the lumbosacral plexus after suspension by the lower extremities; segmental, radiating pain after forced, back-loading positions; trigeminal neuralgia after head trauma; and peripheral neuropathy after tight binding of wrists or ankles.^{28,48,52} Involvement of a neuropathic pain component in the characteristic

pain syndrome seen after falanga are supported by quantitative sensory testing.⁴²

4.3. Nociplastic mechanisms and altered central pain modulation

Factors that influence the central modulation of nociception are now termed nociplastic. The central (spinal and supraspinal) moderating and mediating factors are likely important in the pain experience of torture survivors, but research using objective measures of central activity, such as neuroimaging, or standardized test paradigms to evaluate pain sensitivity and descending pain modulatory pathways, has not been conducted. There are, however, shared characteristics of clinical presentation in survivors of torture and those with other chronic primary pain syndromes attributed to central mechanisms. These include widespread and regional musculoskeletal pain and pain hypersensitivity in peripheral tissues with no apparent tissue pathology, headache, disrupted sleep, fatigue, and visceral pain syndromes,^{2,4} clinical pain phenotypes commonly ascribed to alterations in central nervous system sensitivity, due to reduced central inhibition and/or central amplification.⁵⁹

4.4. Psychological factors

Injury and pain often lead to guarded posture and movement that can persist for longer than the time required for healing and for tissue integrity to be restored. This is commonly associated with, and perpetuated by, both cognitive and behavioral factors as the body overapplies protective maneuvers. In particular, there is a consistent relationship between avoidance of normal activities and fearful processing of internal and external information. For any person with pain, this can reduce participation in normal activities; the resultant physical inactivity and constraints on positive social interactions can significantly impair health and wellbeing.

For a survivor of torture, these impacts are potentially more extreme. For those who are internally displaced or remain in their community, there is the continual threat of capture and repeated torture in a social context of threat and instability. For those who are seeking or who have gained asylum in a new country, the journey is often risky and physically demanding, and relocation is stressful in an unfamiliar community and culture. They may be faced with hostility from native or from other resettled groups within their new community, and lack opportunities and resources to access and engage with services, including health and legal services and education. In this light, the higher rate of mental distress compared with the general population is unsurprising but goes beyond the effects of torture and is not well described by the term PTSD.^{6,25}

However, the relationship between PTSD and chronic pain is well established,^{27,29,51} with some shared characteristics,⁸ particularly anxiety and attentional bias toward somatic cues, and behavioral avoidance of provoking cues, each maintaining the cycle that restricts activity and exacerbates distress. In addition, data suggest that stress responses and pain modulation may be dysregulated in both conditions.^{18,54} Clinicians need to be aware of the possibilities of interacting systems, and integrated cognitive behavioral models for the treatment of comorbid chronic pain and PTSD are endorsed.⁸ Intervention studies that measure both PTSD and chronic pain adequately in survivors of torture are therefore urgently required.³⁷

5. Identification of torture survivors in the clinical setting and special considerations

Various declarations, including the Tokyo Declaration of 1975, the Position Statement on Nurses and Torture of 1989, and the Declaration for Physiotherapists of 1995, make clear the obligation on health professionals to know about torture, its methods, health-related consequences, and possibilities for rehabilitation. Despite this, the traumatic background of torture survivors is often missed.^{10,14} Because many health professionals remain unfamiliar with scientific understanding of chronic pain, nociplastic mechanisms, and central modulation of pain, they cannot explain pain without notable physical examination findings.⁵⁹ Where this biomedical paradigm fails to explain the presentation, the survivor's physical complaints are often disregarded or denied, and unhelpfully, psychosomatic notions are used to fill the gap, even when torture has been disclosed and documented.^{56,58}

Identification of torture survivors in the clinical setting relies mainly on clinicians asking, since the torture survivors are often cautious about disclosing their traumatic history for fear of not being believed or the information being used against them or their families. The health professional may be reluctant to explore or confirm a torture history, out of concern for the survivor and not wanting to upset her or him, or because the health professional feels unprepared to address the torture history and possible distress of the survivor. However, when a torture history remains undisclosed, it is likely that the clinical judgements made by the health professional will be limited, and even inappropriate, leading to misguided interventions and negative treatment outcomes. It is therefore important, when good contact has been established, to ask openly about a previous history of physical or psychological assaults, including exposure to specific torture methods. Disclosure often relieves the survivor and can be a sign that she/he can be optimistic about being treated with respect and care. If the patient is not a torture survivor, it is most unlikely that she or he will be offended by the question.

Special considerations in the clinical encounter with the torture survivor are necessary. Trust is important in all clinical interactions, even more so when trust in others' humanity has been destroyed. Some torture survivors have experienced involvement of health professionals, for example, prison doctors, in torture, and survivors' distrust may extend to health professionals in general.^{33,45,55} A therapeutic alliance needs to be established with attention to communication and context. Where an interpreter is needed, sensitivity to gender, ethnicity, and even community group may be as important as the preferred language, and the torture survivor patient should be allowed to become comfortable with the interpreter. Accredited interpreters should always be sought, particularly those with medical or legal experience with torture survivors who have the necessary background knowledge. Untrained interpreters, especially those with personal relationships to the survivor, should not be used, and interpreters unused to working with torture survivors require briefing and debriefing. Interpretation by phone is often an option and may be preferred by the survivor patient.

Procedures that can remind the torture survivor about the torture, such as those involving electrical equipment or scans performed in closed tubes, may provoke marked anxiety and should be carefully explained and support offered, but in most instances, the examinations can proceed. Flashbacks are intrusive memories with re-experiencing of a traumatic event, sometimes to the extent of losing contact with present reality. Flashbacks can be provoked by sounds, smells, sights, touch,

and tastes with a connection to the torture setting, and by events or situations reminiscent of it: medical equipment, uniformed staff, unforeseen waiting time, waking from unconsciousness (anesthesia), and others.⁴⁴ The risk of flashbacks can be minimized by establishing a calm atmosphere, explaining planned procedures in detail, obtaining fully informed consent, and maximizing control of timing of procedures.

6. Clinical assessment

Clinical assessment of survivors of torture can be performed to document findings consistent with allegations of torture or for the purposes of intervention. In documenting torture, the focus is on the description of symptoms and signs that provide evidence to support the account of torture. Expert documentation of torture is well established in medical work against torture, and international guidelines on assessment of torture survivors for medicolegal purposes are described in the Istanbul Protocol "*Manual on the Effective Investigation and Documentation of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment*", drafted in 1999.¹⁹ It should be stressed, however, that few symptoms can be attributed uniquely to specific torture methods, and physical findings months or years after torture are generally non-specific and cannot on their own establish exposure to torture.

When the assessment is for the purpose of intervention or rehabilitation, ideally a multidisciplinary pain assessment should be provided by medical, psychologist, and physical therapy staff at a minimum, but taking care not to repeat questioning unnecessarily.¹⁷ A thorough examination of the musculoskeletal system and neurological evaluation is essential to identify potentially treatable disorders and, where possible, to identify pain generating or maintaining mechanisms. Knowledge about common methods of torture, and the likely mechanisms by which they produce pain, is therefore a prerequisite for a systematic and effective examination. Most survivors, however, are seen years after torture, with no identifiable peripheral tissue damage from torture that "explains" the pain, nor any clear relationships between torture endured and current pain and related symptoms.

In addition, it is common for survivors to describe periods of unconsciousness as a result of torture, so they may not be able to give a full account; they also suffer problems with memory and may omit details which they find particularly humiliating or shameful, such as sexual assaults. The health professional should bear in mind that s/he is unlikely to get a complete account of torture inflicted.

Beliefs about pain, its origins, and its implications, and about damage suffered, are important areas of questioning. Most torture survivors attribute pain onset to torture, and it is common across cultures to assume that pain signals ongoing damage or deterioration. An explanation of persistent pain without implications of damage provides a basis to reframe pessimistic beliefs about future function and to discuss changes in behavior toward rehabilitation.

Several clinical tests applied in routine assessment of the musculoskeletal system and clinical pain assessment, such as pressure algometry, use pain provocation. If carefully explained, most such tests can be performed but should not be implemented uncritically as part of standard procedure.

7. Treatment and management of post-torture pain

Although it might be convenient to present torture methods as either physical or psychological, the impact on the person is

complex and requires an integrated biopsychosocial framework to understand and to plan support and intervention. Torture survivors may have considerable psychological and social problems, in addition to pain, which complicate presentation, assessment, and rehabilitation: uncertainty about civil status, unstable accommodation, isolation from family, friends, culture, and usual means of support, and access to work. A broader concern is that pain is not recognized, assessed, and managed as a problem in its own right. Left unaddressed, persistent pain may undermine attempts to treat other common problems such as distress and sleep disturbance and hinder acquisition of essential self-management skills. It is therefore important that best practices from pain management in general^{15,31} are extended to torture survivors, and that pain is not mistakenly assumed to be a symptom of post-traumatic stress, fostering neglect of pain treatment.

Reviews of the rehabilitation literature have pointed out the lack of scientifically rigorous studies of unidisciplinary or multidisciplinary interventions for torture survivors.^{22,43} Few studies have evaluated outcomes of pain management, and the quality of evidence they provide is very low.^{5,20} The resulting scarcity of information means that recommendations amount to good clinical practice applied sensitively to individuals who may be seriously traumatized^{5,58} and who have restricted resources, from social support to treatment costs. As is recommended for chronic pain in general, an interdisciplinary, multimodal approach to pain management in survivors of torture is optimal, with a focus on agreed goals of improved understanding, function, and participation. Rehabilitation can be a mixture of individual sessions in combination with psychoeducation in groups with or without an interpreter.

To promote self-management and return to desired activities and lifestyle, interdisciplinary pain management for survivors of torture should integrate education about the nature of persistent pain, psychological interventions targeting cognitive and behavioral aspects of adaptation to pain, physical therapy with the principal goal of enhancing overall physical functioning and reducing musculoskeletal impairment caused by the torture, and pharmacological pain treatment.

It can be difficult for torture survivors to accept the permanence of pain from torture, to abandon hopes of complete relief and to accept that pain reduction and improvement in activity and societal level functioning are more realistic goals, implying consideration of physical, practical, and psychological skills development. Survivors' expectations must therefore be addressed at the outset of rehabilitation. It is very important for all survivors of torture to understand the interaction of pain and mental problems.

Pharmacological treatment is often neglected in the management of chronic post-torture pain, and currently, there are no systematic studies in this population to suggest variation from best practice.^{5,58} As in other chronic pain conditions, pharmacological treatment should be based on a thorough pain assessment and identification of pain mechanisms involved. Adherence to medical treatment is often low and accurate information, especially about expected side effects, is essential; some torture involves forcible medication.

The benefit of interdisciplinary pain management should be evaluated not just by pain relief but should aim to improve health-related quality of life, including activity and societal level functioning.⁵⁰ These should be additional to outcomes identified by torture survivors themselves.

8. Perspectives

Rehabilitation is identified as a right in the UN Convention on Torture, aiming to restore as far as possible the health and capacity for full participation in society of torture survivors. This implies specialist services, preferably integrated, appropriate, and accessible, but nowhere in the world do such services exist. Our understanding of persistent pain from torture is seriously lacking, and research is needed in all areas. Such research is essential to advance theory development and to ensure that pain is more effectively managed in the overall rehabilitation of torture survivors. Ideally, the skills of those who work with torture survivors would be combined with those of pain clinicians and researchers to build understanding and evaluate and improve the effectiveness of treatment and management interventions.

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