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Confirmation of alleged falanga torture by bone scintigraphy – Case report

Received: 8 April 2003 / Accepted: 14 August 2003 / Published online: 3 October 2003

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Abstract Any objective persisting signs of previous torture would be very valuable in the late assessment of the individual claiming such abuse of human rights. We present the case of a 32-year-old man referred to our hospital for an opinion on alleged torture by the falanga method. Magnetic resonance imaging and bone scintigraphy were evaluated and compared as methods of confirming such torture.

Keywords Torture · Falanga · Bone scintigraphy · Magnetic resonance imaging · Human rights

Introduction

Torture is defined as 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 [1]. Falanga, one of a variety of torture methods, is described as beating a stick on the soles of the feet [2].

Positive confirmation of an alleged act of torture is difficult for the medico-legal investigator, particularly in those individuals who are assessed several months after the physical trauma had taken place, and particularly in those in whom the medical reports written by the practitioners in the acute traumatic phase fail to demonstrate positive signs. Such cases are frequently referred to forensic medicine departments for a second opinion and for clarification of such allegations, particularly for the exclusion of false

claims. The aim of this case presentation is to demonstrate the value of both magnetic resonance imaging (MRI) and bone scintigraphy application as useful and appropriate tools for confirmation of alleged torture.

Case report

A 32-year-old man was under arrest at the time he was referred to our hospital by The European Court of Human Rights. He was admitted to prison on 24 February 2001; he claimed to have experi-

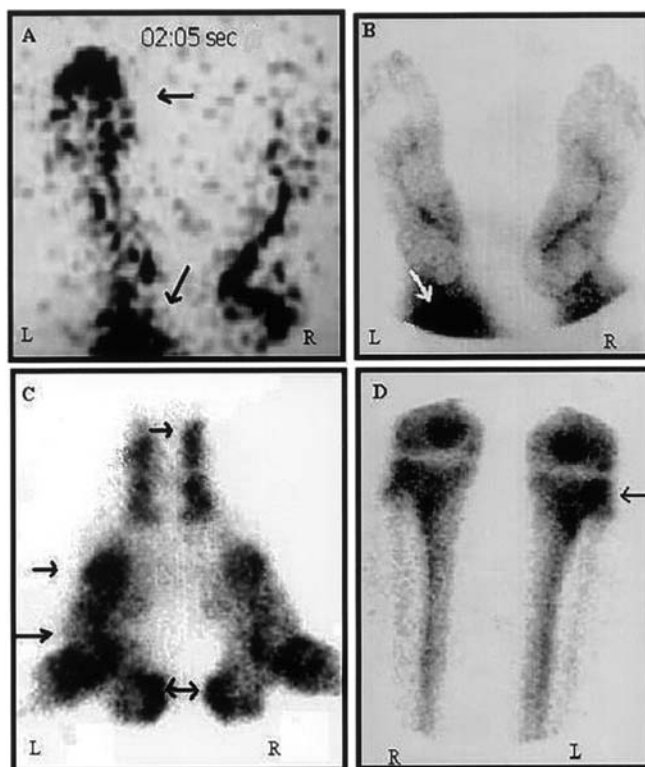


Fig. 1A–D Tc99m MDP multiphase bone scan of presenting case. Regional increased flow (*plantar view*) **A** blood pool activity (*plantar view*) **B** and delayed uptake of feet **C** and leg **D** (shown with arrows)

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enced torture by falanga while in the prison about 4 months prior to the hospital admission. During his clinical examination in our department on 13 June 2001, no fresh or old external physical lesions were found on his body. There was no functional restriction of leg joint movements. Nevertheless he insisted that he had been beaten (falanga) and kicked on his legs for nearly half an hour, and that was repeated after 15 days. There was no other history of trauma to his foot or legs. In order to confirm the alleged torture, we sequentially performed MRI and conventional three-phase bone scintigraphy. MRI was performed on a 1-T MR unit (Magnetom Impact, Siemens, Germany) using the receive-only head coil. For the bone scintigraphy, 20 mCi technetium-99m-methylene diphosphonate was injected and images were acquired by using a single-headed gamma camera (Philips Diagnost Tomo, Eindhoven, The Netherlands) equipped with a low-energy high-resolution collimator.

MRI of the feet, particularly the soles, was interpreted as normal with no diagnostic signs in the bones and soft tissues. On the other hand, bone scintigraphy revealed increased blood flow in the left foot and an increased uptake in the left ankle area and left first phalanges of the toes in the blood flow phase as well as the blood pool. On 2 h late static images of bone scintigraphy, there was evidence of an increased osteoblastic activity on both distal tibiae, predominantly on the left side, on the plantar faces of calcaneum, first phalange of the toes and the left proximal fibula (Fig. 1). Taking all these signs and the patient's history into consideration, the subject was diagnosed as having sustained bone trauma. The medico-legal opinion herein was that there was a high probability that this man had experienced a falanga type of torture.

Discussion

In many states, mostly in developing countries, severe psychological and physical trauma resulting from torture while the person is in custody still occurs and may be linked to political or ethnic reasons.

Any persisting objective sign of previous torture would be very valuable in the late assessment of such allegations. Some studies were published in which imaging tools, such as bone scintigraphy, x-ray radiographs, computerized axial tomography, and ultrasound, are compared in terms of their usefulness in the assessment of alleged torture with

bone and soft tissue trauma [2, 3]. MRI is a relatively new modality in this area. Savnik et al. [4], who studied MRI as a single tool for the imaging of plantar structures of the foot after falanga torture, reported that a thicker central portion of the plantar aponeurosis is observed in the victims who had been exposed to a falanga torture in the past when compared with controls.

As a part of the medico-legal investigation, patients with the suspicion of bone damage following alleged torture occurring in the past should be referred for bone scintigraphy, which is a sensitive indicator of trauma, and may still show detectable signs there of several months or years after the torture had occurred [2, 3]. Beating the soles of the feet with a stick, namely falanga, is associated with foot trauma additionally involving the ankle joints and the distal tibia which are externally bound during the act of torture. Although MRI of plantar structures was normal in the present case, bone scintigraphy demonstrated increased blood flow in the bones of the feet and distal tibia that might be attributed to the bone trauma resulting from the falanga as stated by the patient.

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