

Psychiatric impact of torture could be amplified by head injury

November 6 2009

Depression and other emotional symptoms in survivors of torture and other traumatic experiences may be exacerbated by the effects of head injuries, according to a study from the Harvard Program in Refugee Trauma (HPRT), based in the Massachusetts General Hospital (MGH) Department of Psychiatry. In the November 2009 *Archives of General Psychiatry*, the researchers report finding structural changes in the brains of former South Vietnamese political detainees who had suffered head injuries and clearly link those changes to psychiatric symptoms often seen in survivors of torture.

"This is the first study since the 1950s to demonstrate brain changes in survivors of extreme violence. That work looked at Holocaust survivors, and now we are the first to connect similar brain damage with [mental health](#) issues in survivors of political torture," says Richard Mollica, MD, director of the HPRT and leader of the study. "We believe, although it has not yet been proven, that these physical effects may help explain why survivors of both torture and traumatic head injury often don't do well with standard therapies for depression and anxiety."

Studies by Mollica's team and others have documented the fact that head injuries are a common form of torture among prisoners of war and political detainees. But no previous work has investigated whether the neurologic effects of [head injuries](#) were related to the chronic psychiatric disorders often reported in torture survivors. The current study analyzed information from 42 Vietnamese immigrants, now resettled in the U.S., who had been detained in so-called "re-education

camps" and 15 Vietnamese immigrants of similar ages who had not been detained.

All study participants completed questionnaires regarding any history of head injuries and on their exposure to torture or other traumatic experiences before being interviewed by study investigators to assess current symptoms of depression and [post-traumatic stress disorder](#). Comprehensive magnetic resonance imaging studies measured the size and thickness of brain structures that previous reports have associated with depression, anxiety and post-traumatic stress disorder (PTSD) and also have suggested could be affected by traumatic head injuries.

Among the former detainees, 16 reported having experienced head injuries at some time, and 26 did not. Not only were detainees with a history of head injury more likely than those without to report symptoms of depression, the imaging studies showed they had significant reductions in the thickness of the frontal and temporal lobes of the cerebral cortex, reductions not seen in non-head-injured detainees. Participants whose head injuries were more severe had even greater structural changes and more debilitating depression symptoms. These head-injury-associated effects were independent of the effects of other forms of torture or trauma participants had experienced. While head-injured ex-detainees did not have a greater risk of being diagnosed with PTSD, their PTSD symptoms were more severe.

"It's well known in neuropsychology that the frontal and temporal lobes affect executive function - which includes planning, learning, self-monitoring, and flexibility in social interactions," Mollica explains. "It could be that torture survivors who don't do well with standard therapies have head-injury-based cognitive deficits that interfere with standard approaches like behavioral or exposure therapy. It's very rare for patients to relate subsequent health problems to a head injury or to recognize that a head injury is affecting their emotions.

"In some cultures," he adds, "patients and families are relieved to learn that emotional problems are related to a physical injury and may become more committed to working with programs specially designed to treat head injury patients. We hope that our documenting physical effects of brain damage in a group of torture survivors will provide evidence leading to improved diagnostic and treatment approaches. The next steps should be clinical trials comparing the results of head-injury-specific treatment programs with more traditional therapies for emotional disorders in patients with a history of both trauma and head injury."

Mollica also notes the need to improve training for the physicians most likely to treat such patients in the community. "Most primary care physicians are not prepared to identify mild traumatic head injury either in patients who may have experienced trauma or torture - including veterans or refugees - or in survivors of assaults or even auto accidents." He is a professor of Psychiatry at Harvard Medical School.

Source: Massachusetts General Hospital ([news](#) : [web](#))

Citation: Psychiatric impact of torture could be amplified by head injury (2009, November 6) retrieved 24 April 2024 from

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