

MANAGEMENT OF POST TRAUMATIC SYMPTOMS WITH PRE-TRAUMATIC VULNERABILITY

Wajid Malik, Sohail Ali, Mowadat Hussain Rana

Military Hospital, Rawalpindi

INTRODUCTION

On Oct 08, 2005, an earthquake measuring 7.6 on the Richter scale struck the northern parts of Pakistan followed by number of aftershocks. Mental health clinics were established in the affected areas after the disaster as there was rudimentary or absent pre disaster mental health facilities.

Individuals who experience or simply witness traumatic events can develop posttraumatic reactions [1]. It has been shown that after a catastrophic natural disaster, post-traumatic reactions in children may reach epidemic proportions, remain high for a prolonged period, and jeopardize the well being of the child population of the affected region [2]. There is ample evidence that personality structure and experience such as neuroticism or childhood adversity in the period before the traumatic event also influence the risk of developing posttraumatic disorders [3].

Once basic needs are regained such as food, clothing, and shelter, help is needed for the emotional and psychological well being of survivors.

This case report describes importance of early detection and problems associated with assessment as well as diagnosis of Posttraumatic symptoms in children. Description includes relationship of trauma history with psychopathology and various strategies for management of posttraumatic symptoms in children and adolescents after natural disaster. To our knowledge this is the most comprehensive case study of an adolescent with posttraumatic stress symptoms after a natural disaster such as earthquake.

The patient discussed has read this manuscript and has provided written informed consent for the publication of the material presented.

CASE REPORT

Parents of my patient, a 14 years old school going girl, sought medical advice because of their concerns that she had stopped using her left hand, decline in school performance and difficulty going to sleep. After two months of visiting various medical outlets and faith healers she was referred to Mental Health Relief Unit Bagh. Her chief complaints were difficulty in moving the left hand, irritability, poor concentration, insomnia, crying spells and forgetfulness that interfered with her school performance. Her mother added that following the trauma she became fearful of remaining alone, especially at night. She needed repeated reassurances before going to bed that nothing was going to happen and no one was going to die. There were also episodes of rage when the patient would pinch herself, pull her hair, or bang her head against the wall; 'to relate the feeling.' Duration of all these complaints was more than two months

The patient was resident of a village near district Bagh of Azad Jammu and Kashmir. First among three siblings, she was born to a taxi driver who went abroad in search of a living barely two months after her birth. She was brought up in a resource constrained extended family system within the strongly Islamic and patriarchal Kashmiri cultural tradition. As a child she was attached to her mother much more than the two younger siblings. She was completely immunized as per EPI schedule and no delay in the milestones was noticed. She started schooling at the age of five, was always a good student

Correspondence: Maj Sohail Ali, Department of Psychiatry, Military Hospital, Rawalpindi.

and she was socially well adjusted. Her life took a turn for the worse at the age of 8 when her mother developed a debilitating depressive disorder. The illness led to neglect of the children. As the eldest, she had to assume responsibility for her siblings as also for maintaining the household. Patient did her best to cope. There was some social support in the shape of her best friend who lived in the neighborhood. Father also provided solace occasionally. Although he visited the family once every two years, he was always warmly welcomed and eagerly awaited. His financial and moral support was a source of strength for the patient, whose close As the eldest child, she had a bond with the father assumed greater importance as mother's role in the family diminished over time.

Evaluation of Trauma History

To understand the importance of trauma in psychopathology of the patient, a thorough trauma history was in order. The process spanned days. In the beginning, the patient had great difficulty recalling events. There were gaps in her memory of that time, and her recall of events was often inconsistent. Her account of the day of earthquake is narrated as under; "On 8th of Oct the day started normally. I left home for school along with my younger sister. I was in the classroom when the ground started shaking violently. Before we could move out, the roof started falling on us. Something hit me, and I was buried under the rubble of the collapsing building. I could not move, nor raise my voice. My head ached and the body was in severe pain, I remember feeling choked. From among the ruins I could hear moans and cries of a classmate. As seconds passed into minutes and minutes into hours, her moans became weaker and weaker, till I could hear them no more. And lying before me, right in front of my eyes was what looked like her hand, cut from the rest of the body. That image, and those sounds, will haunt me forever. Even if I try, I can't shake them off my memory. I don't know how long it took

for them to bring me out. But soon afterwards, I lost my senses. When I awoke, it all felt like a terrible nightmare, but it was real, and remains to this day, a recurring reality. A lot had changed in those few minutes. I had lost my best friend and two cousins. I had lost all my belongings. Mother, my siblings and I remained in a tent village for a month. Then my father returned with some money, and we were able to build parts of our home. Whenever the ground shakes, and it shakes often, my heart starts thumping and my mind is filled with those horrid images. I want to run away, I want to shake this fear off, but where will I go. There is no escape. I hate loud sounds. I hate the sound of children crying. I hate schools and schoolwork. What's more I hate my own hand. I dislike looking at it, because it reminds me of the one I saw in the rubble. Sometimes life just drains out of it, and it doesn't move. What good would it do, even if it does, it can't stop anything. Nothing can stop it. Religious leader says its God's disgust on us for being bad Muslims. I believe him. I listened to music, and watched TV. This must be it. I don't want to do any of that anymore. I don't want to focus; I can't concentrate. I forget things. I don't want to be disturbed. I want to be left alone with myself. At night, I have trouble going to bed. I fear the roof would cave in on me, and we would all suffocate to death. And there are times when all this becomes unbearable. I feel anger, great anger, at my family, this place and myself.

Psychiatric examination established that she was adequately nourished and appropriately developed for her age, with average height and weight. She was depressed with disturbed biological functions and weeping episodes. There were intrusive flashbacks of traumatic memories and avoidance of things that reminded the tragic event e.g. school, school work and sounds of children. The image of that hand which she saw in the rubble lead to dislike for her own hand; extreme anxiety and alexithymia lead to conversion of the inner psychopathology into loss of functioning of her own hand.

Moreover, there was strong feeling of guilt that she has not helped those who were dying. This feeling of guilt was aggravated by her distorted religious belief that her wrong deeds are the main cause of this disaster. On cognitive functions assessment there was impairment in concentration, attention and short-term memory.

All the set of investigations that include blood complete picture, urine routine examination and thyroid function tests were within normal limits.

MANAGEMENT

Eight sessions of Cognitive Behaviour Therapy (CBT) were done in one month period. Although, cognitive techniques do address the question of dysfunctional beliefs and self-schemata, most of the emphasis of these therapies was on the minimization of avoidance behaviour, and experience of avoided fear, with subsequent reduction of anxiety and increase in confidence. After provision of safe place and relaxation techniques, the therapy included In-session re-experiencing exposure to the traumatic event and between-session in vivo exposure to feared situations. Re-experiencing exposure entailed asking the patient to close her eyes and tell the story of the traumatic event as though it were happening in the present [4]. In the first session; she provided a description of her ordeal. Although this was not done as a re-experiencing exercise, she was intensely emotional as she related the story of having seen an amputated hand. She holds herself responsible for not helping that child. She attempted to tell the story but could not complete it. This explained that the patient dissociated in response to extreme anxiety or fear of that scene. At the fourth session, she described the whole story during the re-experiencing exercise. She provided details and experienced intense affect. During next sessions, she seemed less distressed and could easily tell the whole story.

An extensive school-based Psycho-education Program (PE) developed by mental

health team was implemented in schools of the earthquake-affected area to help normalize traumatic reactions in large numbers of children. This patient participated in that programme.

Propranolol 5mg twice a day and Fluoxetine 10mg once a day was also started. After four weeks of treatment she was able to resume her school as well as her home responsibilities, thereafter fortnightly follow-up was continued.

DISCUSSION

Disasters are tragic events that disrupt the normal functioning of a community and overwhelm personal and community resources.

A growing body of literature has addressed the post-traumatic stress among children and adolescents after natural disasters in various parts of the world. Earthquakes have typically been the more thoroughly studied disasters. Posttraumatic stress has been documented in children exposed to life threatening natural disasters and as may be expected the prevalence of PTSD is higher in children than in adults exposed to same stressor. Earthquakes have been associated with posttraumatic stress reactions among school-age children. Studies have indicated that children and adolescents exposed to the catastrophic 1988 Spitak earthquake in Armenia were suffering from chronic severe posttraumatic stress disorder (PTSD) symptoms even years after the earthquake [8]. It is unusual for any one post-traumatic disorder to occur in isolation but comorbidity is also usual. In children and adolescents, high rate (78%) of PTSD symptoms in the earthquake exposed group has been observed. Additionally, a substantial proportion of these children scored above criteria (32%) for depression compared to the control group (12.5%). Severe or moderate symptoms of PTSD were associated with high scores of depression [9].

Not all children exposed to traumatic events develop PTSD. A major research focus

has been identifying factors (mediating factors) that are associated with increased (vulnerability) or decreased (resilience) risk for developing PTSD following exposure to traumatic stress. Factors previously demonstrated to be related to risk can be summarized in these broad categories: Characteristics of the child: e.g. subjective perception of threat to life or limb, history of previous traumatic exposures, coping style, general level of anxiety, gender, age.

Characteristics of the event: e.g. nature of the event, direct physical harm, proximity to threat, pattern and duration of the event.

Characteristics of family/social system: e.g. supportive, calm, nurturing vs. chaotic, distant, absent, anxious [10-12].

Eleven possible neurochemical, neuropeptide, and hormonal mediators of the psychobiological response to extreme stress were identified and related to resilience or vulnerability. The neural mechanisms of reward and motivation (hedonia, optimism, and learned helpfulness), fear responsiveness (effective behaviors despite fear), and adaptive social behavior (altruism, bonding, and teamwork) were found to be relevant to the character traits associated with resilience [13].

PTSD is a chronic disorder. Untreated PTSD remits at a very low rate. Indeed the residual emotional, behavioral, cognitive and social sequelae of childhood trauma persist and appear to contribute to a host of neuropsychiatric problems throughout life including attachment problems, eating disorders, depression, suicidal behavior, anxiety, alcoholism, violent behavior, mood disorders and, of course, PTSD [14-17]. Childhood trauma also impacts other aspects of physical health throughout life (e.g., heart disease, cancer, chronic lung disease, and various risk behaviors). With four or more adverse childhood events, the risk for various medical conditions increased 4- to 12-fold [18,19]. Children with PTSD have altered sensitivity and functioning of neuroendocrine

and autonomic nervous systems which may predispose to the development of various medical conditions such as asthma, hypertension, cardiac arrhythmias, endocrine disorders, gastrointestinal disorders and various other somatic complaints. Furthermore, PTSD complicates the treatment of various medical conditions. In children with diabetes, for example, the PTSD-related hyper-reactivity of the counter-regulatory hormones such as adrenaline may complicate or prevent effective control of blood sugar [20].

PTSD does not always exist in isolation rather the majority of psychopathology in the aftermath of trauma was best conceptualized as a general traumatic stress factor, suggesting that when PTSD and depression occur together, they reflect a shared vulnerability with similar predictive variables. However, there was also evidence that in a minority of cases at 3 months, depression occurs independently from PTSD and was predicted by a different combination of variables [3]. Researchers have reported a tendency for some individuals to dissociate during or soon after traumatic events, a phenomenon referred to as peri-traumatic dissociation. Peri-traumatic dissociation is a risk factor for acute and chronic PTSD [21]. To be more precise Trauma-related persistent dissociation is a substantial predictor of PTSD, whereas peri-traumatic dissociation ceases to predict PTSD at the multivariate level. These findings suggest that it is less what happens at the time of a trauma e.g. disrupted encoding that predicts PTSD than what occurs thereafter i.e. persistent avoidance [22].

Treatment researchers have investigated various types of psychotherapies for PTSD, cognitive behavioral therapy and eye movement desensitization reprocessing (EMDR) have been found to be effective [23]. School-based community-wide screening followed by psychosocial intervention can effectively identify and reduce children's disaster-related trauma symptoms and may facilitate psychological recovery [24]. The

efficacy of Propranolol and Fluoxetine in children with anxiety and PTSD has been established [24]. Similarly, Clonidine been shown to be an effective agent in children with PTSD [6-7].

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