

Acute stress disorder in a ten year old child following a major earthquake

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Abstract

Acute stress disorder is a syndrome characterized by the development of severe anxiety, dissociative and other symptoms that occur between three days to one month after exposure to an extremely traumatic or stressful life event. This case report presents a 10-year old girl child that presented with an acute stress disorder after being rescued from a state of burial for three and half hours inside a demolished house following a major earthquake. She was admitted to Psychiatry ward for eight days and was discharged successfully in a pre-morbid state after psychological interventions. With this particular child's presentation in the emergency following a major traumatic event, we can learn to address and timely manage the secondary psychological trauma the child, her family and other relatives may undergo.

Key words: Acute stress disorder, Children, Disaster, Pre-morbid

INTRODUCTION

Acute stress disorder (ASD) is an entity that describes clinically significant post-traumatic symptomatology that develops within one month of life-threatening traumatic experience¹. It was introduced in Diagnostic and Statistical Manual of Mental Disorder - IV (DSM-IV) in 1994 as a predictor of Post-traumatic Stress Disorder (PTSD). The prevalence of ASD after a severe traumatic event is highly variable across studies and types of traumatic exposures and population². ASD has a higher prevalence in children in comparison to adolescents and adults and more likely tends to affect children aged six years and younger⁵. Females have a greater risk of developing ASD than males owing to gender related issues as violence and rape³. Studies report between 10-30% prevalence of significant post-injury acute stress distress in children². Prior history of mental disorder, high levels of negative affectivity, greater perceived severity of the traumatic event and an avoidant coping style, catastrophic appraisals of the

traumatic experience pose risk for development of ASD³. Dissociative symptoms dominate the disorder. Typical symptoms of ASD include re-experiencing aspects of the event, avoidance of reminders of the event, and hyper arousal symptoms⁴. A scale called the Child Stress Reaction Checklist (CSRC) is used to screen for ASD in children².

CASE REPORT

A 10-year-old girl child, studying in Grade III, Hindu by religion, Chhetri by caste, and hailing from Sindhupalchowk was brought to paediatric emergency at Tribhuvan University Teaching Hospital by her elder sister with a history of weakness of right side of the body, decreased food and fluid intake, loss of speech output, disturbed sleep and two episodes of urinary incontinence for five days following survival from a major earthquake that took place on 12th Baisakh, 2072. She was buried in a demolished house for three and half hours on that day. She had distressing dreams at night related to the earthquake and showed intense fear to earthquake related cues. She appeared sad and fearful and was hyper vigilant. She showed startling response at times and had difficulty in concentration at work. She was irritable for the first few days after admission and showed anger outbursts. However, she had difficulty in recalling the traumatic event. She had a

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marked impairment in socio-occupational and academic functioning following the trauma. Past history, family history and personal history were unremarkable. Pre-morbid temperament revealed a playful, interactive, obedient, extrovert and studious personality with predominant mood being euthymic.

General physical examination revealed a 2cm×3cm size lacerated wound over the sacro-coccygeal region. Vital parameters were within normal limits. Thorough systemic examination including neurological evaluation was normal. Mental State Examination (MSE) revealed a thin-built child dressed in trouser and vest with satisfactory hygiene, not willing to communicate and co-operate with the interviewer and minimal reactivity of facial expression. She communicated at times with her sister in gestures. Pre-dominant mood was irritable. She showed thumb-sucking at times. She was well oriented to time, place and person. Motor activity was grossly reduced with infrequent change of position and she did not move the right side of her body. Attention was aroused and concentration was sustained but distractible at times. She was alert and vigilant. Thought, perception, judgment and insight could not be assessed.

Investigations including complete blood count, urine routine, serum sodium, potassium and random blood sugar, renal function test and electro-cardiogram were within normal limits. CT-Scan Head was done on the day of presentation to paediatric emergency and revealed no abnormalities. Neurological evaluation and neuro-imaging ruled out the possibility of associated brain injury to explain right sided hemiparesis. She was started on a combination of Intravenous Ampicillin and Cloxacillin 250mg administered four times a day from the day of admission to the emergency for three days and continued on oral therapy for next four days thereafter. Regular dressing of wound was done for the lacerated wound over sacro-coccygeal region for five days.

Psychiatry consultation was sought on the third day of presentation in Pediatric emergency and the patient was transferred to Psychiatry ward the next day after morning round discussion. The diagnosis of ASD was made according to DSM-V. She was then started on Brief Supportive Psychotherapy, play therapy activities directed at motivation enhancement, and engaging her in activities of interest, specially drawing pictures from the day of transfer to Psychiatry Ward.

She started showing gradual improvement in symptoms. Her sleep and appetite improved within next two days. She started using gestures very frequently and

demonstrated a wide range of facial expressions over next two days. She mobilized her right lower limb and started producing speech on the third day of transfer to the Ward. However, she started babbling and showed regressive speech pattern. She started walking normally on the fourth day. She mobilized her right upper limb well from the sixth day of transfer and could run from the seventh day. She reached pre-morbid level within eight days of admission in Psychiatry Ward and was discharged on the ninth day.

She was followed up on every 15 days for initial one month, then monthly for the next six months. On her last follow up, she was very interactive and cheerful. Her biological functions were maintained and according to her elder sister, she has attained a premorbid state.

DISCUSSION

ASD results from exposure to natural disasters like earthquake, flood, tsunami, hurricane, cyclone, landslide etc or man-made disasters like terrorist attack, road traffic accidents, war, torture, physical and sexual abuse. ASD can occur at any age but has a special predilection to children and adolescents⁵. Children who experience a traumatic event are at a risk of developing ASD⁵. The traumatic after-experiences may manifest in different ways depending on the age of the child. Older children usually verbalize and express their feelings and emotions while the younger children present with subtle and unusual physical symptoms. Studies on ASD in child victims in the early post-disaster period and specially post earthquake are scarce⁵.

A cross-sectional study done over four weeks immediately following a devastating earthquake in Sikkim on September 18, 2011 showed that eighty-four (2.66%) children had stress symptoms⁵. Among them 48.78% who belonged to the older age group had psychological stress which was statistically significant on CIES scores without any gender predilection. Static posturing (41.86%), sleeplessness (32.55%), recurrent vomiting (13.95%), excessive crying (13.95%), anorexia (9.30%), and nocturnal awakenings (4.65%) were found in younger children and three of them required hospital admission⁵. Our patient presented with features of dissociative disorder which are a prominent characteristic of ASD; and sleeplessness, anorexia and nocturnal waking, are in consistence with the pattern of manifestations of post-traumatic stress in the immediate post-traumatic period as stated in the study.

The National Child Traumatic Stress Network (NCTSN) recommends that rather than focusing on DSM diagnostic

categories, psychiatrists should use a comprehensive approach for assessment and intervention that takes into account the following seven domains of impairment seen in children and adolescents exposed to trauma: attachment, biology, affect regulation, dissociation, behavioral regulation, cognition, and self-concept. Direct exposure to an event, proximity, loss of a family member, serious injury, younger age, and female gender has been found to have an association with post-traumatic disaster difficulties in children. In addition, previous psychiatric difficulties (particularly anxiety disorders) and parental post-traumatic stress symptoms have been correlated with post-traumatic stress in children. An evaluation by a Child Psychiatrist is warranted if a child is not functioning reasonably well with others in school, play, or other usual activities; or if parents report significant changes in a child's behaviors or demeanor; or if a child is demonstrating significant signs of depression or anxiety, is having significant behavioral difficulties, or talks about suicide.

Psychiatrists who respond during the acute phase of a disaster need to tailor screenings and interventions

to adapt to the space and time available and it is important to reunite children with their parents as soon as reasonably possible and to minimize their time apart if some separation is needed during the provision of screening, support, or treatment. When possible, the creation of a separate child-friendly area or "Kids" corner can be instrumental in providing a break for parents impacted by an event, including time to address their own mental health needs, and allowing children a place to play and seek positive interactions⁶. We tried to resolve the underlying stress in our patient by engaging her in playful activities, positive interactions and her activities of interest, specially drawing pictures.

CONCLUSION

ASD is quite common in children. Manifestations of ASD in children vary based on the age. Psychiatrists need to be aware of the patterns of symptoms the child present with following a traumatic experience. Early identification and psychotherapeutic and psychopharmacological interventions can best manage the underlying stress and can reduce the incidence of Post-traumatic stress disorder in future.

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