

Post Traumatic Stress Disorder Following an Electric Shock

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Summary

Post Traumatic Stress Disorder (PTSD) is still a diagnosis which is frequently missed even by psychiatric professionals. Each doctor needs to maintain a high level of awareness that patients may have experienced trauma; that PTSD can often occur for a variety of common symptoms; and that it may also be at the root of a persisting treatment-resistant depressive or anxiety state. This case demonstrates that occupational accidents may result in this condition.

Key Words: Post traumatic stress disorder, Electrical injury

Introduction

Electricity does not cause many accidents but it is a serious source of potential danger. Electrical hazards, unlike mechanical, are usually not obvious.

Post Traumatic Stress Disorder (PTSD) was recognised following war combat but more recently has been recognised following a range of traumatic experience like volcanic eruptions, violent crimes, rape, sexual assault and occupational accidents¹.

The case being presented here is a case of PTSD following an occupational accident during which the patient suffered an electric shock.

Case Report

A 37-year-old Malay general worker of Tenaga Nasional was admitted to Hospital Seremban after an electrical accident. He had been helping the wireman and sustained an electric shock while working on a high tension cable. He had been told that the cable was not conducting electricity at that time. He was holding the cable in his left hand and sawing it with his right when he sustained the electric shock. He could not release the cable. He sustained burns in the

left hand and complained of numbness in that arm. He did not lose consciousness.

He was warded for observation and the burns were treated. He was told that besides the burns, there was nothing else wrong. He was given a total of 14 days medical leave and advised to return to work after that.

He was however, unable to work and complained of weakness in his left arm. He presented himself two weeks after discharge at the medical outpatient department and was examined. No neurological deficit was detected. He also complained of lethargy, difficulty in sleeping, inability to concentrate, being easily provoked and irritable with friends and family.

He was referred to the Psychiatric Clinic on March 15, 1991, three weeks after the incident. He complained of the same problems and said that he was apprehensive most of the time. He also said that he felt 'stupid' or numb and detached. His wife informed us that he was preoccupied and occasionally mumbled to himself. He suffered from startle reactions. His appetite was poor and he had little interest in his hobbies. His sexual desires were markedly diminished and he was irritable – at times assaultative. This was

brought on by minor incidences like colleagues teasing him and children being noisy at home. He suffered from palpitations and difficulty in breathing which were brought on by memories of the accident. He was at first unwilling to discuss the accident but later admitted extreme fear at the time of the incident. He had been afraid that he was going to die. He said that he kept remembering the incident although he did not want to. With it, he relived the anxiety and fear. He felt ashamed to admit this fear. He had nightmares.

There was nothing significant in the past medical, surgical or psychiatric history. He was not a good student. He failed his Lower Certificate of Education (LCE) and then left school. He worked at a number of jobs including that of construction labourer, factory worker and security guard. He then got his present job in Tenaga Nasional. He was content with this job. He had no history of absenteeism and was not a problem worker.

He married at the age of 20 and had five children. He was a good husband and father. He did not consume alcohol. He smoked about 20 cigarettes a day. He did not have an anxious personality. He was cheerful and friendly. He got on well with others.

On examination at the Psychiatric Clinic, he was found to be depressed and anxious. He still complained of weakness of his left arm. The patient was well orientated to place and person. Both his recent and remote memory were intact. He was attentive during the entire interview and showed good concentration. His judgement and insight were intact.

Physical examination at this juncture again revealed no neurological deficit. Systemic examination was unremarkable.

He wanted to be put on light duty. A provisional diagnosis of anxiety neurosis was made. He was treated with anxiolytics i.e. diazepam initially and later alprazolam. Counselling was also done. He was advised to return to regular duty. He followed up with the Psychiatric Clinic for a few months and then defaulted as he felt there was no improvement.

He is at present at a desk job and quite content. He has not requested for compensation. His relationship with his family is better. He relives the incident less frequently. The fear is still there and he is not prepared to return to regular duty. He still complains of weakness of the left arm. There is no wasting and reflexes are normal. He is at present on physiotherapy for that.

Discussion

Post Traumatic Stress Disorder (PTSD) is a shock reaction syndrome. It is recognised as a consequence of a traumatic experience outside the usual range of human experience. The person usually does not have a previous psychiatric problem. PTSD is characterised by three groups of symptoms². These are:

1. those related to reliving an aspect of the traumatic episode, nightmares, sudden actions or feeling as if the episode is taking place again.
2. symptoms related to avoiding anything likely to remind the individual of the trauma, like avoiding situations that could bring it to mind; and less specific symptoms like decreased interest, feelings of detachment, loss of capacity to express affection.
3. symptoms of heightened irritability such as hyperarousal, sudden shock reactions, sleep disturbances, quick temper and outbursts of anger.

This patient sustained an electric shock as a result of an occupational accident. He did not have an anxious premorbid personality nor suffered from any stress disorder. There was no other traumatic episodes in his life at that time or previously that could account for this psychological problem. The symptoms lasted for more than a month so it was more than just an adjustment disorder.

During the time he was on follow up he did not make any claims for compensation. To date he has not made any claims for compensation.

Although he was at first treated as an anxiety disorder, it is likely that he suffered from PTSD.

CASE REPORT

Those at risk of electrical accidents can belong to two categories:

1. Those skilled or trained and experienced in electrical work.
2. Those unskilled but who operate machinery powered by electricity.

Accidents to skilled persons are not as uncommon as would be thought. By their nature of work they are exposed to electrical danger more frequently. Sometimes work on live conductors may be necessary. Even the most careful of men cannot guarantee that an accident cannot occur.

Many of these accidents cause burns, shock, other injuries like fractures, nerve injuries and their sequelae. This psychiatric problem of PTSD is a result of this accident.

Table I shows a study in the United Kingdom on Occupational Categories of Injured Persons done from 1973 to 1977 retrospectively³.

The number of skilled persons involved in electrical accidents is not small and the largest group is the category which this patient belongs to.

Electrical injured persons show a higher incidence of severe emotional disturbances and post traumatic depression. Among the other disturbances seen were anxiety disorders, an amnesic syndrome, personality changes and symptoms comparable to post concussion syndrome.

References

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Table I
Occupational categories of injured persons

Classification of personnel	Accidents
Electricians, wiremen, electrical fitters	254
Supervisory staff	32
Testing staff	25
Electrical apprentices	25
Switchboard attendants & Substation attendants	2
Total of skilled personnel	338
Total of unskilled personnel	438

Persons suffering from electrical injuries and burns demonstrate more severe psychopathological symptoms and the least likelihood of rehabilitation and returning to work.

There is really not much in the literature which document how many individuals develop neuropsychological and neuropsychiatric dysfunctions following an electric shock. It is therefore necessary to be aware that they do occur and to submit the patients for assessment to reveal possible disturbances.

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