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Eye Movement Desensitization Reprocessing (EMDR) treatment in patients with Post Traumatic Stress Disorder (PTSD)

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ABSTRACT

Background : Post Traumatic Stress Disorder (PTSD) is a condition marked by the development of symptoms after exposure to traumatic life event .The impact of PTSD on the patients is widely reported. Among the many treatments, the Eye Movement Desensitization and Reprocessing (EMDR) is a therapy used specifically to treat PTSD. People who have suffered for years from distressing memories , nightmare ,abuse or other traumatic event can often gain relief from EMDR. The purpose of this study was to explore EMDR treatment effectiveness in decreasing of tragic events reminding in PTSD patients.
Method : According to DSM IV criteria 71 patients with PTSD in Imam Hossein Hospital of Shahid Beheshti University , M.C , Tehran ,Iran were selected for EMDR treatment .All patients had finished high school . They were subjected to a psychological and psychiatrical evaluations at the time of inclusion in the program.
Treatment sessions took place once a week, and the average number of EMDR therapy sessions was five. Treatment ended when the patient reported not having the typical PTSD symptoms on his/her daily life.
Result : EMDR Therapy has caused 66% blurriness in harmful event, 93% getting far and 14% cleared harmful event from mind, 89% mentioned that are senseless about event, 40% said this harmful memory comes to their mind in a scrawl mood. In 2/8% of patients EMDR affected image of event became clear.
Conclusion: Our results indicate that this type of therapy is effective to treat many of the PTSD symptoms that can impair people's daily life activities .
KEYWORDS: PTSD, EMDR ,PATIENT

INTRODUCTION

A traumatic event provokes fear, helplessness, or horror in response to a threat of injury or death. Individuals who are exposed to such events are at an increased risk of developing Post-Traumatic Stress Disorder (PTSD)[1]. The highest the tension, the hardest to promote behaviors that is socially organized and adjusted. Nowadays violence-related tension is a frequent occurrence in which physical and psychological integrity is threatened. People subjected to numerous traumas may acquire inadequate behaviors, which may not be adaptive for survival. PTSD may be an example of incapacity of adaptation. Among the negative symptoms of PTSD, such as arousal, flashbacks, and excessive fear, sleep disturbances are considered secondary symptoms [2–5].

One of the key features of PTSD is the re-experiencing of images, thoughts, or perceptions of the event in the form of nightmares or flashbacks. This is particularly interesting because of the regulatory influence of sleep on the processing of traumatic memories. Rapid Eye Movement (REM) in sleep plays a major role in the integration of traumatic and stressful memories [3]. Other characteristic symptoms include persistent avoidance of stimuli associated with the trauma and the experience of hyperarousal associated with hypervigilance, difficulty falling asleep, irritability, and impaired concentration [6]. PTSD is a notable mental health problem that is strongly associated with impairment, decreased well-being, and compromised health [7,8]. Moreover, evidence from studies in medical situations suggests that childbirth [9] and certain treatments (10,11), have a capacity to confront the individual with horror, fear and helplessness, and can create a pattern of symptoms similar to those seen in individuals with PTSD.

PTSD is not the only condition that may occur following a frightening or aversive event [12]. A wide array of studies exist that report a relationship between exposure to distressing events and the subsequent development of fears and specific phobias [13]. An important limitation of the aforementioned studies was that the etiology of these symptoms was not examined. Accordingly, it is not clear whether the PTSD symptomatology displayed by highly anxious patients is the result of confrontations with stressors and other types of trauma exposure. This makes it difficult to ascertain whether the high level of intrusive symptoms reported by the anxious patients is not just a reflection of general distress or anticipatory anxiety.

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In the present study EMDR was used to treat patients with PTSD. This technique was developed by Francine Shapiro [14].

The purpose of this study was to explore EMDR treatment effectiveness in decreasing of tragic events reminding in PTSD patients.

Morover, the evaluation of re–experience traumatic event during EMDR treatment over the blood pressure, heart rate and respiratory rate was examined as well.

METHODS

This research was a cross-sectional study using questionnaires conducted on 71 patients with PTSD in Imam Hossein Hospital of Shahid Beheshti University of Medical Sciences, Tehran, Iran. The patient were under care for at least 3 months, but no more than 5 years and underwent psychiatric evaluation, according to SCID–DSMIV to confirm the diagnosis of PTSD and to determine possible comorbidities.

All patients had finished high school . They were subjected to a psychological and psychiatrical evaluations at the time of inclusion in the program. Treatment sessions took place once a week, lasting from 30 to 90 min each. In each session we were monitored the patients for blood pressure ,heart rate ,and respiratory rate before and during EMDR maneuver , and different maneuver include nystagmus (eye movement) ,knock of finger to palm, knock of finger to knee, knock of palm with sound ,and acoustic-ocular with sound were used when the patients recall the traumatic memory and its associated features. The average number of EMDR therapy sessions was five. Treatment ended when the patient reported not having the typical PTSD symptoms on his/her daily life. After the end of treatment the patients were again evaluated exactly in the same way as in the first time.

STATISTICAL ANALYSIS

Desciptive data was collected. . The data of psychological and psychiatricl evaluation were analyzed by the paired Student's *t*-test. The level of significance was set at $P \leq 0.05$.

RESULTS

Descriptive statistics for 71 of PTSD patients include 56 women (78.9%) and 21 men (21.1%) **.** Mean age of the responders was 28years (SD=7.15) with renged in age from 17-47 years . The data of marital status include 45 patient were single (63.4%),and 22 case were married (31%) and 4 case loss of the partners (5.6%). The results of divulging date of PTSD are shown in Table1. Among event experience of patients were, 1.4% hearing (one case), 4.2% hearing and seeing (three case), 93% with all of senses (66 case). Table 2 showed manners of responses in patient to EMDR maneuver for treatment .The analysis results over blood pressure ,heart rate and respiratory rate before and during EMDR maneuver showed meaningful increasing of this following with remembering harmful event ,that has showen in the table3 and diagram 1 to 4 . Results from EMDR frameworking over type of remembrance showed that this procedure has caused 66.2% darkness of event image ,92% abstention of event image and 14.1% forgetfulness , 88.7% menthioned that are senseless about event , 40.8% said this harmful memory comes to their mind in a streaky event image, and in 2.8% of patients EMDR affected image of event became clear. Table 4 showed consequences of EMDR treatment in patient with PTSD Time .

EMDR resulted in reduction of PTSD symptoms, impact of the event, and improvement of quality of life, quality of sleep, and general well-being.

TABLE 1. Divulging date of PTSD

Time event	Frequency	Percentage (%)
Months < 6	9	12.7
Between 1 to 6 months	27	38
Months >6	34	47.9

TABLE 2. Manner of responses to EMDR maneuver

Maneuver	Frequency	Percentage (%)
Nistagmos	35	49
Knock of finger to palm	13	18
Knock of finger to knee	12	17
Knock of palm with sound	3	4.2
Acoustic-ocular with sound	28	39.4

TABLE 3. Means for blood pressure/Heart rate and respiratory rate

Means	Before	After
BP systolic	11.9	12.8
BP diastolic	78.5	77.9
H.R	77	87
RR	15.8	16.2

TABLE 4. Consequences of EMDR treatment in patient with PTSD Time

Response of patients To EMDR	Frequency	Percentage (%)
Darkness of event image	44	66.2
Abstention of event image	65	91.5
Forgetfulness	10	14.1
Without Feeling to event	63	88.7
Streaky event image	29	40.8
Ineffective	1	1.4
Clear event image	2	2.8

Diagram1: Heart rate before EMDR

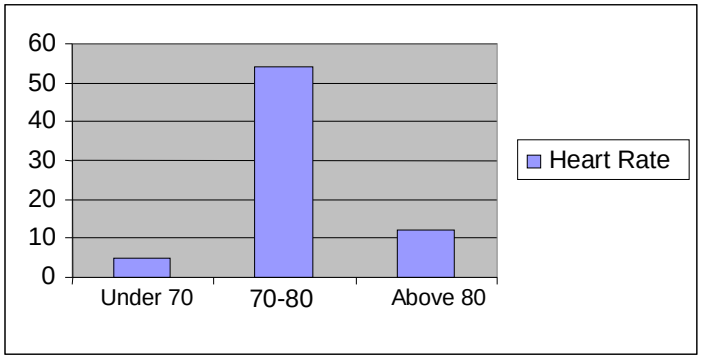


Diagram2: Heart rate during EMDR

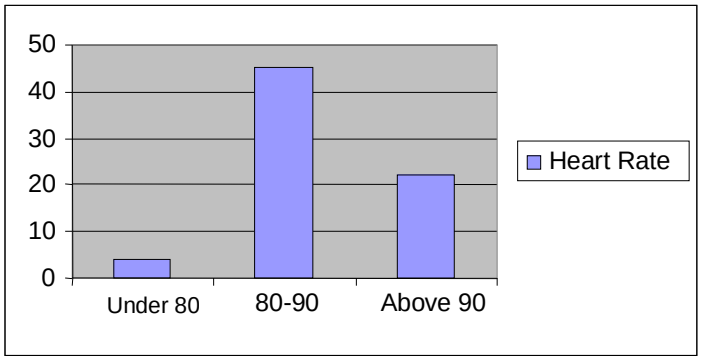


Diagram3: Respiratory rate before EMDR

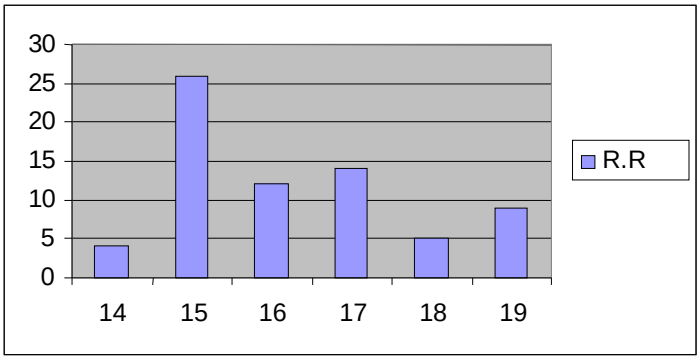
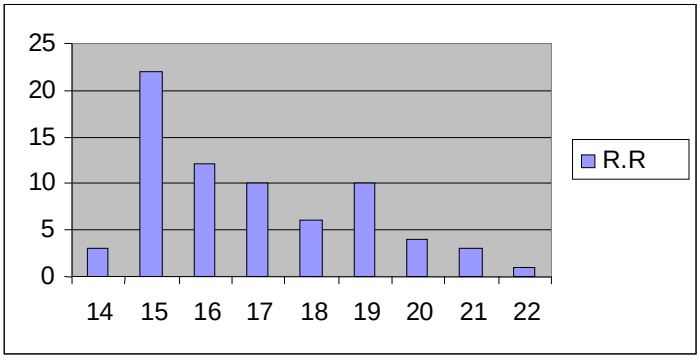


Diagram4: Respiratory rate during EMDR



DISCUSSION

The results of our study indicate that EMDR treatment can induce improvement in PTSD symptoms**.** In the present study EMDR has caused blurriness in harmful event , getting far ,cleared harmful event from mind ,senseless about event,decrease in arousal and fear , that can affect all level of the patients wellbeing ,mental, emotional and physical .

The decrease in arousal and traumatic memories, flashback, fear in our study are in agreement with other studies [15,16].

One possible explanation for our results is that there is a decrease arousal due to decreasing tragic memory that can induce improvement in PTSD symptoms in people's daily life activities . when a traumatic or distressing experience occurs, it may overwhelm usual ways of coping and the memory of the event is inadequately processed; the memory is dysfunctionally stored in an isolated memory network. When this memory network is activated, the individual may re-experience aspects of the original event, often resulting in inappropriate overreactions. This explains why people who have experienced a traumatic incident may have recurring sensory flashbacks, thoughts, beliefs, or dreams. An unprocessed memory of a traumatic event can retain high levels of sensory and emotional intensity, even though many years may have passed.

Conclusion

EMDR may decrease the vividness and negative emotions associated with traumatic memories.

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