

EYE MOVEMENT DESENSITIZATION AND REPROCESSING TREATMENT: NEW PSYCHOTHERAPEUTIC PERSPECTIVES IN THE CONTEXT OF METABOLIC DISEASES

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ABSTRACT – Objective: Eye movement desensitization and reprocessing (EMDR) has been successfully applied for the treatment of post-traumatic stress disorder (PTSD). However, the use of EMDR to process traumatic events in the context of chronic metabolic conditions, such as innate metabolic disorder diagnosis or clinical management, has been poorly explored and reported so far. This work aims to outline the potential of EMDR application to treat PTSD in the context of metabolic disorders.

Case presentation: Upon PTSD diagnosis using the Impact of Event Scale questionnaire, EMDR was applied to the parent of a child affected from galactosemia (Case 1) and an adult patient affected from phenylketonuria (Case 2), both diagnosed with PTSD, following the standard procedural steps: history-taking, preparation, assessment, desensitization, installation, body scan, closure and follow-up.

Results: The two cases presented were successfully treated with EMDR, and both subjects felt more serene overall during follow-up visits.

Conclusions: The EMDR technique, targeting patients and other affected populations, may represent a promising method for psychological support in the context of innate metabolic disorder diagnosis and management, as well as for therapy compliance.

KEYWORDS: Eye movement desensitization and reprocessing (EMDR), Post-traumatic stress disorder (PTSD), Innate metabolic disorder (IMD).

LIST OF ABBREVIATIONS: Cn – negative cognition; Cp – positive cognition; EMDR - eye movement desensitization and reprocessing; IES - Impact of Event Scale; IMD - innate metabolic disorder; PKU – phenylketonuria; PTSD - post-traumatic stress disorder; SUD - Subjective Units of Disturbance; VoC – Validity of Cognition.

INTRODUCTION

Eye movement desensitization and reprocessing (EMDR) is an evidence-based psychotherapeutic approach¹ that enables the functional processing and adaptive resolution of specific distressed life experiences and trauma-related memories. It quickly and effectively works through desensitization via ocular movements and other forms of alternate stimulation and applies to patients or patient groups

of any age at different stages of the disorder². The EMDR therapy is based on the Adaptive Information Processing model³, which assumes that the neurological system can inhibit the processing of negative, overwhelming traumatic events. Thus, emotions and perceptions triggered by the event may be blocked in neural networks disconnected from the functional circuit, and constructive processing of such memories would consequently be hindered⁴. EMDR comprises eight procedural steps: “history taking” (1), “preparation” to the EMDR intervention (2), “assessment” of memory targets to address via EMDR (3). The memory/event target is then processed to adaptive resolution in the following phases: “desensitization” via bilateral movements (4), “installation” of positive sensations (5), “body scan” (6). Finally, the “closure phase” (7), leading to complete or incomplete processing, and “follow-up” (8) (Figure 1)^{5,6}.

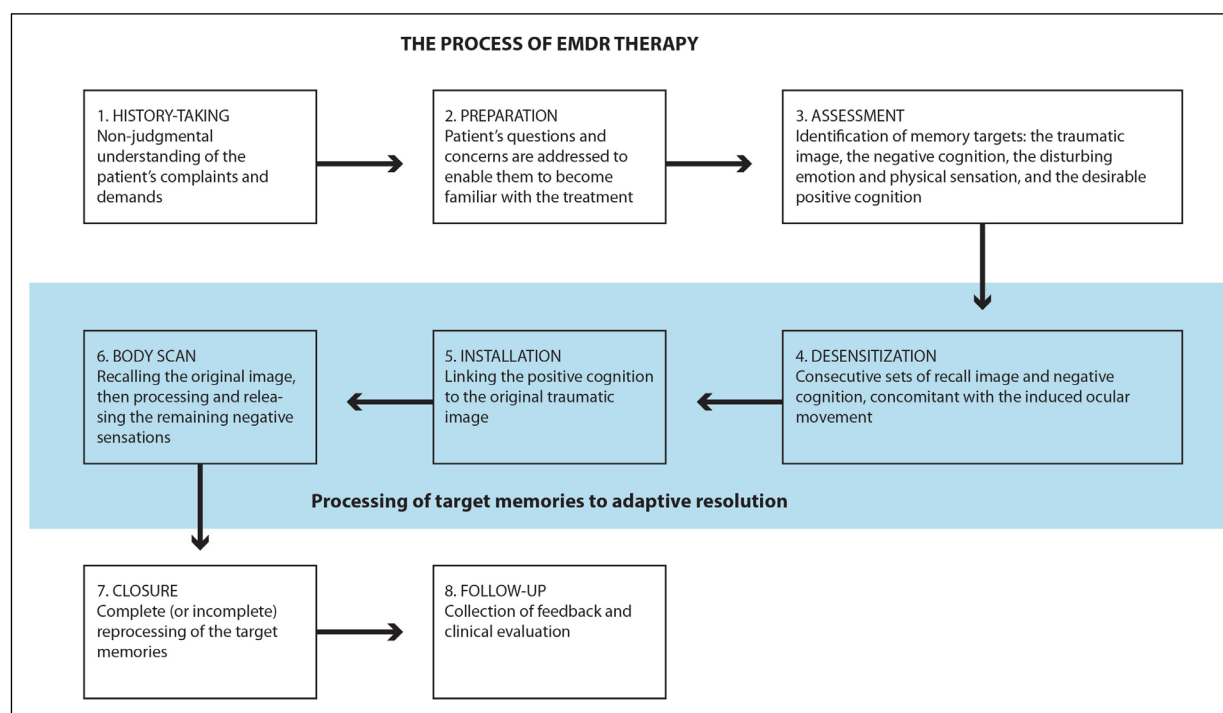


Figure 1. The process of EMDR therapy.

The EMDR technique is widely recognized and approved to treat psychopathologies, such as phobias^{7,8}, panic disorders^{9,10}, anxiety disorder¹¹, behavioral and self-confidence problems¹², complex cases of mourning¹³, body dysmorphic disorder¹⁴, sexual dysfunction¹⁵, pedophilia¹⁶, performance anxiety¹⁷, chronic pain and serious diagnosis¹⁸, and phantom limb pain^{19,20}, as well as on large-scale humanitarian emergencies, natural disasters and accidents^{21,22}.

EMDR therapy has also been investigated in the context of post-traumatic stress disorder (PTSD), which is a disabling clinical condition resulting from experiencing trauma²³⁻²⁵. Typical symptoms of PTSD are flashbacks, memories and dreams of the traumatic event, and psychological stress triggered by exposure to specific recall factors. Other relevant symptoms are tension, insomnia, irritability, difficulty concentrating, and avoidance of places, people and dynamics related to the event²⁶.

To minimize these effects, prevention and early diagnosis of PTSD can be of critical importance besides the treatment²⁷, which can rely on various psychotherapeutic approaches, such as cognitive-behavioral therapy, psychodynamic therapy, systemic-relational therapy, and bioenergetic therapy²⁸⁻³⁰. EMDR therapy has been validated in the field of PTSD by improving the diagnosis and reducing its symptoms²⁵. Regarding innate metabolic disorders (IMDs), the communication of an IMD diagnosis can represent a traumatic event that causes high levels of anxiety and stress^{31,32}. Furthermore, the hospitalization and the clinical management of IMDs can result in stress disorders for patients and their family members and a worsening of their quality of life³³⁻³⁵. Therefore, psychological support should be included as a standard procedure to accompany children, parents, adults, and entire families in all critical stages involved with IMDs³⁶.

As it has already been extensively and successfully investigated in other trauma-related PTSD^{25,37,38}, EMDR could be a useful, applicable approach in both the prevention and treatment of PTSD related to IMD diagnosis and management, a field of application that has been poorly explored and reported so far³⁹. A time-limited EMDR has been proven able to reduce PTSD symptoms, psychological comorbidity, and distress in parents of children with mucopolysaccharidosis type III⁴⁰.

This work presents two clinical cases with the aim to provide an overview of the current use of EMDR for the treatment of PTSD in the context of the diagnosis and clinical management of rare metabolic disorders and to outline the potential of this application.

CASE PRESENTATION

Two cases were analyzed: the parent of a child with galactosemia and an adult patient with phenylketonuria (PKU). To assess subjective distress caused by the traumatic events, both were given the Impact of Event Scale (IES) questionnaire, with 22 items rated from 0 (“not at all”) to 4 (“extremely”), yielding a total score ranging 0–88⁴¹. Before starting to work on traumatic memories, EMDR implies the assessment of the “resource”, which may give strength and control during stressful moments, and the “safe place”, which corresponds to a peaceful place from a memory, an experience, or an image. EMDR was then applied according to the standard procedural steps⁵, starting with 1) history-taking, a non-judgmental understanding of the patient’s complaints and demands during the first assessment visit, and 2) preparation, a meeting in which questions and concerns about the treatment are addressed so that the patient can become familiar with the technique. Phase 3 followed with the identification and assessment of the memory targets: the traumatic image, the negative cognition (Cn), disturbing emotion and physical sensation, as well as the desirable positive cognition (Cp) that is associated with the image. Through the Validity of Cognition (VoC) scale, rated from 1 (completely false) to 7 (completely true), the emotions triggered by the Image and Cn were assessed. Furthermore, the Subjective Units of Disturbance (SUD) scale arising from the memory/target event were rated from 0 (“no disturbance”) to 10 (maximum disturbance), accompanied by body localization of such disturbance. Phases (4–6) from processing memory to adaptive resolution followed. During phase 4, desensitization, consecutive sets of recall Image and Cn were carried out in conjunction with induced ocular movement. After each set, the patient was asked to refer to the changes or new information. When no more changes were reported, the SUD was rechecked. The procedure was repeated until the SUD score was zero or ecological 1. During phase 5, installation, that strengthens the preferred Cp; the desirable Cp should be linked to the original traumatic Image and was validated when the VoC score was 6 or 7. In phase 6, the body scan, the remaining negative physical sensations were further processed and relieved by recalling the original Image now linked to the Cp. The closure procedure (phase 7) assessed the outcome of the therapy, whether complete or incomplete (e.g., when SUD was more than 1 or VoC was less than 6). At the end of the EMDR intervention (phase 8), the IES questionnaire was repeated for reevaluation. This case report does not require an Ethics Committee approval. Written informed consent was obtained from patients to describe their cases in the literature.

Case 1: Mother of a child with galactosemia

The mother of a 4-year-old child diagnosed with galactosemia by newborn screening was recommended by a specialized team to visit our center because of a difficult acceptance of her child’s condition. During the anamnesis, she was administered the IES questionnaire. Besides the score of 39, suggesting the presence of PTSD, further control issues emerged. She reported difficulty and anxiety in sleeping with her child, eating a lot of sweets, and drinking large amounts of milk to calm herself, especially after the diagnostic confirmation call. The words “the child should not drink milk, so breastfeeding should not be considered” also brought up other memories related to the hospitalization and intensive care, which had a strong emotional impact on her. The mother was invited to focus further on her memories and, particularly those that were still vivid and recurrent in ordinary events, for instance, during mealtimes, while drinking milk, during birthday parties, and whenever her child had to go to the hospital for checkups.

The intervention with the EMDR technique was proposed and explained to the patient, along with a psychoeducational session about her emotional and physiological reaction to the trauma. A total of five sessions were conducted. The first session focused on assessing “the resource”, which she identified

as the strength and “the safe place”. The first target identified was the phone call communicating the IMD diagnosis and the phrase “breastfeeding should not be considered” (Image: losing contact with her baby and worries about the disease; Cn: “I have no control”; Cp: “I can handle it”; VoC=5; Emotions: fear, anxiety; SUD=10). Two sessions of EMDR intervention were then devoted to this target (SUD-initial session=5; SUD-final session=0). A second target was identified as the hospitalization in intensive therapy and transfusions (Image: signing the papers for the hospitalization and seeing her child in intensive therapy; Cn: “I feel powerless”; Cp: “I can learn to handle it”; VoC=4; Emotions: anxiety; SUD=10). Two additional sessions of EMDR intervention focused on the second target (SUD-initial session=8; SUD-final session=0). When the patient reported no longer experiencing any remaining memory disturbance, memory linkage to Cp was carried out, followed by the body scan phase. In the closure phase, two more feedback and support sessions followed the EMDR intervention. In the end, the mother reported greater serenity and peacefulness in dealing with her child’s condition and better sleep. The IES questionnaire was then repeated and provided a final score of 8, indicating a successful application of EMDR.

Case 2: Adult patient affected from PKU

A 42-year-old woman affected from PKU, diagnosed by newborn screening, was invited to visit our center for psychological counseling and support. Upon diagnosis, she was assisted by her mother. Later, at the age of 16 years, she started managing her diet on her own. She always felt surrounded by a very supportive social environment.

In order to achieve a diet-free lifestyle, at the age of 41 years, she was then introduced to replacement therapy by our center. Despite initial skepticism, after several meetings, she decided to start the therapy and was monitored through the entire therapeutic process. During this time, she continued to feel the need to monitor her diet and check her condition, and sleep disorders began to emerge.

The IES questionnaire was then submitted, resulting in a score of 48. PTSD was diagnosed, particularly on the spectrum of hyperarousal and intrusiveness. Further exploring her control needs and sleep difficulties, four targets emerged concerning dangerous events from her childhood and her first marriage. EMDR intervention was suggested. After initial identification and assessment of the “resource” and “the safe place”, 12 sessions dedicated to processing the identified targets were conducted. After the installation, body scan and closure phases, and during follow-up visits, she reported feeling more serene in general, not recalling images and sounds from her past memories, and not needing to control her diet. At the end of the intervention, she was again administered the IES questionnaire, whose score dropped to 9.

DISCUSSION

EMDR is a validated approach for the treatment of several psychopathologies, including PTSD. However, its use for PTSD related to traumatic events, such as IMD diagnosis and clinical management, is still a poorly explored field of application.

In the first case presented, EMDR was successfully applied to a mother who developed PTSD after her child was diagnosed with galactosemia; in the second case, EMDR was successfully used to treat a woman diagnosed with PTSD related to the clinical management of PKU and the difficult acceptance of the therapy.

In the only relevant article reported in the literature³⁹, to our knowledge, the EMDR intervention was applied to treat a parental couple diagnosed with PTSD related to the pathological condition of their child with mucopolysaccharidosis A type 3 and its clinical management. The treatment concerned four sessions in 2 consecutive days, and the effects were evaluated both qualitatively and quantitatively. At the end of the intervention, both parents reported feeling much more resilient and able to manage all the events related to their child’s chronic disease. Compared with the pre-treatment period, a significant reduction in the clinical symptoms of PTSD was observed after the intervention with EMDR, which was maintained over time.

Together with the case reviewed from the literature, the two cases presented in this work have shown that EMDR can provide patients affected from IMDs and their families with an efficacious treatment to process the traumatic events related to the diagnosis and management of the disorder. Regarding PTSD related to the presence of other pathologies and therapies involved, as in the second case of a woman affected from PKU, PTSD treatment may have a positive impact on the acceptance of other existing pathologies and thus on therapy adherence.

Furthermore, the diagnosis of PTSD in reported cases occurred relatively later than the first exposure to the traumatic events. On the other hand, the use of EMDR in early diagnosis may potentially impact the effectiveness of the treatment itself and, from a preventive perspective, may minimize the effects of the trauma and the severity of PTSD.

In order to achieve early diagnosis and optimal conditions for treatment and clinical management, the presence of a psychologist within a multidisciplinary IMD-dedicated team or the prompt referral to a psychologist by the clinical staff is, therefore, deemed necessary from the first moment of the communication of the IMD diagnosis to the clinical management across all critical stages of future growth and adulthood and any other potentially traumatic event. In this way, patients and families dealing with metabolic disorders will receive the most efficacious PTSD prevention and treatment service and support. The application of EMDR for the treatment of PTSD in this specific field appears promising, although more extended and representative studies are needed to reach relevant definitive conclusions.

CONCLUSIONS

The use of EMDR for PTSD related to the diagnosis and management of metabolic disorders appears to be promising. Early diagnosis could be crucial for the efficacy of treatment and for preventing or minimizing PTSD symptoms. Therefore, the presence of a psychologist within the multidisciplinary team dedicated to IMDs or the referral to this figure is needed from the first moment of diagnosis communication and at all stages of the clinical process.

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No artificial intelligence-assisted technologies were used in the production of this article.

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All data generated or analyzed during this study are included in this published article.

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The authors declare that they have no conflicts of interest to disclose.

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INFORMED CONSENT:

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