Case Report

Cognitive-analytical therapy for a patient with functional neurological symptom disorder-conversion disorder (psychogenic myopia): A case study

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Functional neurological symptom disorder commonly presents with symptoms and defects of sensory and motor functions. Therefore, it is often mistaken for a medical condition. It is well known that functional neurological symptom disorder more often caused by psychological factors. There are three main approaches namely analytical, cognitive and biological to manage conversion disorder. Any of such approaches can be applied through short-term treatment programs. In this case, study a 12-year-old boy with the diagnosed functional neurological symptom disorder (psychogenic myopia) was put under a cognitive-analytical treatment. The outcome of this treatment modality was proved successful.

Key words: Conversion disorder, cognitive analytical therapy, functional neurological symptom disorder, psychogenic myopia

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INTRODUCTION

Conversion disorder, also called functional neurological symptom disorder in the diagnostic and statistical manual of mental disorders, fifth edition (DSM-5), is an illness of symptoms or deficits that affect voluntary motor or sensory function, which suggest another medical condition, but that is judged to be caused by psychological factors because the illness is preceded by conflicts or other stressors.[1] Paralysis, blindness, and mutism are the most common conversion disorder symptoms.[1] Conversion disorder in the children below the age of ten and individuals higher than 35 years old is rare.[2] During childhood, conversion disorder occurs most commonly in the 10-15 year age bracket, and the condition is roughly twice as common in girls as it is in boys.[3] In most cases symptoms date from a minor illness or injury, obsessive personality trait,[4] an anxiety state or depression[5] and previous sexual abuse[6] all predispose to development of a conversion disorder. Environmental factors include domestic stress, feelings of parental rejection, poor intrafamilial communication, unresolved grief[7] and unhappiness at school.[8] According to psychoanalytic theory, conversion disorder is caused by repression of unconscious intrapsychic conflict and conversion of anxiety into a physical symptom.[1] Conversion disorder symptoms also allow patients to communicate that they need special consideration and special treatment.[2] Such symptoms may function as a nonverbal means of controlling or manipulating others.[1]

Among several approaches to the treatment of conversion disorder, cognitive analytical therapy (CAT) is one of the known treatments, which have a great application in the treatment of psychological disorders.[9] The comparative studies show that the CAT has been effective at least as much as various types of short-term psychotherapies.[10] However, it is comparable with individual-oriented psychotherapy and cognitive-behavioral treatment[11] and interpersonal psychotherapy.[12]

Myopia, also called near- or short-sightedness, is a refractive defect of the eye in which collimated light produces image focus in front of the retina when accommodation is relaxed. Those with myopia typically can see nearby objects clearly, but distant objects appear blurred.[13] A diagnosis of myopia is typically confirmed during an eye examination by an ophthalmologist or an optometrist.[14]

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But conversion disorder based on DSM-5 should not be fully explained by a general medical condition, or by the direct effects of a substance.[1]

In this case report study, we presented a 12-year-old child afflicted with functional myopia (conversion disorder) who underwent CAT treatment plan.

CASE REPORT

The patient under consideration was a 12-year-old boy who had been under the supervision of different ophthalmologists for 4 years. During this period, the patient had undergone various ophthalmologic and neurological examines. However, no noticeable organic reason was put forth for the disorder. Finally, with the possibility of a psychological reason, the patient was referred to a clinical psychologist. After the different psychological evaluations, he was considered to be a patient afflicted with functional neurological symptom disorder-conversion disorder by a clinical psychologist and a psychiatrist.

The examinee was the first child of the family. The parents of the child had divorced when he was three and half years old. The father had married again and during this period, the child had lived with a father. It seems that the problems of child vision problems had intensified after the divorce and, in particular, when the second wife of his father gave birth to a new child.

The patient underwent CAT treatment plan. Single-case design (A/B) was used to assess the effects of an intervention. Before and after intervention set of tools were done. The intervention includes twelve sessions of CAT and four sessions of follow-up. And during the treatment, intensity and weakness of conversion symptoms were observed. Also, the long-term effects of interventions during the treatment period were evaluated.

Zung's self-rating anxiety scale (SAS), beck depression inventory, second edition (BDI-II) and visual acuity test (VA) have been used for evaluation before and after the intervention. BDI-II used for measuring symptoms and intensity of depression which includes 21 items. Each item has a score between 0 and 3 and it is one of the valid depression measurement scales in a clinical trial.[15] SAS, introduced by Zung, has been widely used in research and in clinical practice for the detection of anxiety.[16] In this study, in order to evaluate the vision power of the examinee, the VA test was used by an ophthalmologist.

The cognitive-analytical intervention in psychogenic myopia had a significant effect on the increase of VA. Although, had a significant effect on the decrease of depression and anxiety. A raw score of depression based on BDI-II was 44 in the pretest and after 5-month follow-up it become 15. However row score of anxiety based on SAS was 47 in pretest and after 5-month follow-up it become 23, and so on VA increased as it comes in below table in both eyes [Table 1 and Figure 1]. Moreover, based on continues clinical interview and reports of family there was a significant improvement in complaints of the case.

DISCUSSION

The findings of study emphasize on the effectiveness of CAT on the decrease of depression, anxiety and short-sightedness. Some studies emphasizes on psychological etiology in visual disorders.[17] A case report of 17-year-old female showed that psychological problems can produce psychogenic visual disorders in an abused child, in this study with the use of strong suggestion, her visual fields were brought out to normal limits and her VA with correction was improved to 20/20 in each eye.[18] A role of psychological stress in the etiology of various ocular disturbances has been suggested, but virtually no research has explored a possible link between psychological stress and myopia development.[17] In a same study myopic participant had a significantly higher score on the Stress-Fear-Abuse scale in a factor analysis than did emmetropic participants.[17] Exploratory analyses suggested that myopes in their childhood had lower self-esteem, were more lonely, experienced more criticism about physical aspects of themselves, had higher weight, sat closer to the television, and may have experienced more fear, anxiety and more very stressful events or situations.[17] The relation

Table 1: Comparison of depression, anxiety and VA in pretest and posttest

Test	BDI-II	SAS	VA
Pretest	44	47	Right-3.75
			Left-4.25
Posttest	15	23	Right-1.25
			Left-0.50

VA = Visual acuity; BDI-II = Beck depression inventory-second edition; SAS = Self-rating anxiety scale

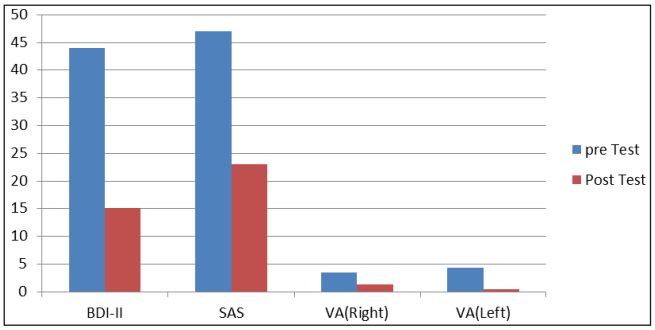

Figure 1: Comparison of depression, anxiety and visual acuity in pretest and posttest

between myopia and depression was subject of some studies.[19] However, many researches confirm the effect of CAT in somatoform disorders and also psychosomatic disorders.[12] Moreover, this study shows that mental status like depression and anxiety had interconnection with other sensory functions like VA.

AUTHOR'S CONTRIBUTION

All authors contributed in the study concept, conducting the analyses, drafting and revising the paper. All authors confirmed the final draft for submission and accept the responsibility for the paper content.

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