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Separation anxiety disorder in a 13-year–old boy managed by the Neuro Emotional Technique as a biopsychosocial intervention☆

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Abstract

Objective: To describe a case of an adolescent with separation anxiety disorder (SAD) presenting to a chiropractor for treatment.

Clinical features: The patient was a 13-year–old boy who had consulted with a clinical psychologist and had been diagnosed with SAD using the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* criteria. The patient was unable to attend school camps or sleep at friends' homes because of anxiety.

Intervention/outcome: The patient underwent 8 sessions with a chiropractor certified in the Neuro Emotional Technique (NET). Two days after his last NET treatment, he attended his first school camp without incident. He also slept away from home at a friend's home for the first time without incident. Six months postintervention, he returned to his clinical psychologist, where she independently reevaluated him stating that he no longer met the criteria for SAD according to the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*.

Conclusion: This single case report cannot provide a causal relationship between the clinical outcome and NET without further investigations. Neuro Emotional Technique is a unique therapy that does not take the place of psychotherapy; however, it may be used as an adjunct to it. It is possible that, with valid and reliable follow-up research, the biopsychosocial principles that NET addresses may be of value to children and adolescents with SAD.

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Introduction

Separation anxiety disorder (SAD) is considered to be the most prevalent of the anxiety disorders.[1-5] It is characterized by excessive anxiety associated with the separation of a child from the primary attachment figure (eg, usually a parent) or from the home. The anxiety created from such a detachment is beyond what is considered normal for the child's developmental stage, and the resultant behavior must last for at least 4 weeks. Separation anxiety disorder causes significant distress or impairment in social, academic, or other important areas of functioning.[1,2]

Children and adolescents with SAD have somatic problems, such as headaches, stomach aches, nausea, vomiting, palpitations, and insomnia,[2,6,7] which are either a direct result of the anxiety or manufactured by the child to avoid separation from the primary attachment figure.[8,9] The outcomes of anxiety disorders in children and adolescents range from remission to chronic illness.[10] If untreated, they are at risk of developing impairments that may last a lifetime,[11,12] such as chronic anxiety, depression, substance abuse;[13] attempting suicide,[14] or being hospitalized for psychiatric illnesses.[8,10] Definitive recommendations for treatment of childhood anxiety disorders are challenging, given the conflicting data among the psychopharmacologic and psychosocial intervention studies.[4,5,15] The purpose of this article is to report the use of Neuro Emotional Technique (NET) treatment on a 13-year–old boy diagnosed with SAD.

Case report

A 13-year–old boy presented to a chiropractor certified in the NET protocol in August 2005. The patient presented with a history of anxiety in relation to sleeping away from home and being away from his mother. This occurred whether it was at a friend's home or a school camp. He expressed his anxiety as a fear that something would happen to his mother and that she would not be able to return to pick him up. Whether the separation had occurred or was anticipated, the patient and his mother complained that he would experience fear, worry, trembling, sweating, "stomach churning," and crying.

The patient's mother described him as very "clingy" during his preschool years aged 3 and 4 years, as he would not separate from his mother when she dropped him off at preschool. The patient would attach himself to his mother, and the preschool teachers would have to pry him off to create a physical separation. Between the ages of 5 and 10 years, the patient recalled having a repetitive nightmare in which his mother died and he was unable to help her.

At the time of the chiropractic consultation, the patient was not taking any medications, had never sustained any fractures, and had never received chiropractic care. At the age of 18 months, the patient had asthma and was regularly hospitalized with severe attacks after a cold during the winter months. The patient's hospitalizations lasted between 1 and 4 days, and his mother would stay with him during the day as well as overnight. However, during the hospital stay, the patient's mother would leave for short periods of time to eat and shower in the hospital facilities or go home to attend to her other child. The patient was medicated with Ventolin (GlaxoSmithKline, Philadelphia, PA) (asthma reliever medication, a bronchodilator), prednisone (anti-inflammatory), and Seretide (GlaxoSmithKline, Philadelphia, PA) (combination of an asthma preventer and controller) during those years. The asthma lasted for a period of 2 years; and according to his mother, he outgrew his condition. The patient had sutures inserted into his chin after a fall off his bicycle at the age of 6 years and had a concussion at the age of 12 years during a game of rugby. The patient comes from a stable, middle-class, 2-parent family environment and is otherwise a healthy teenager. He is a high achiever at school who enjoys playing basketball, tennis, and rugby, and enjoys interacting with adults and his peers. Other than the medical history noted above, the patient had no other clinically significant features.

In 2003 (grade 5) at age 11 years, the patient experienced "homesickness" while away on a school camp, which produced such a high level of distress that he vomited. The camp staff were unable to console his distress that the parents were notified and advised to collect him. It was after this event that the parents sought professional help for their son.

After consulting with an independent clinical psychologist at a specialist anxiety clinic, the patient was diagnosed with SAD in March 2004 (age 12 years). Parent and child interviews, as well as the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (*DSM-IV*)[1] criteria, were used to confirm the diagnosis. It was recommend that the patient and his mother each attend separate 9-week cognitive behavioral therapy (CBT) group programs. Two other consultations were made with the psychologist before the patient's attendance at the grade-6 (2004) and grade-7 (2005) school camps.

In 2004 (grade 6), the patient, aged 12 years, had a 2-night camp to attend. For 2 months preceding the camp and at school before boarding the bus, the patient experienced his usual symptoms of anxiety. During the evening of the camp, his symptoms returned (fear, worry, trembling, sweating, stomach churning, and crying), followed by vomiting. The parents were informed of his distress; however, they were too far away to collect him from the camp. In 2005, when the patient was 13 years old, he experienced the same symptoms; and the same behavior ensued at the year-7 school camp. The patient reported that he did not settle or enjoy either camp.

Despite the patient's consultations with his clinical psychologist addressing his anxiety and his cognitive behavioral group therapy sessions in 2004, the patient was still unable to attend a school camp or sleep at a friend's home without having anxiety.

It was after the year-7 camp in 2005 that the patient's mother consulted the chiropractor.

The chiropractor chose the NET protocol to address this patient's needs. Neuro Emotional Technique is a method of finding and removing so-called neuroemotional complexes. *Neuroemotional complexes* have been defined as "a subjective maladaptation syndrome adopted by the human organism in response to a real or perceived threat to any aspect of its survival."[16] Neuro Emotional Technique is an intervention designed to alleviate negative distressing stimuli by removing these patterns by accessing the nervous system via somatic stimulation. Neuro Emotional Technique is a 15-step system that integrates the principles of several health modalities, including chiropractic principles, cognitive behavioral principles, traditional Chinese pulse assessment, acupuncture theory, meridian theory, and semantics.[16-18] Muscle testing is used throughout the procedure as an indicator for physiologic reactivity to cognitive recall under contemplation.[19] It has been found that, when patients make statements that they do not agree with (ie, noncongruent), their muscles become inhibited and test weak.[19] Conversely, when patients make a statement that they are congruent with, and are muscle tested, the muscles remain facilitated and test strong.[19]

The patient was evaluated for a healthy deltoid muscle group, capable of resisting the light testing pressure of the practitioner. A practice trial was conducted to familiarize the patient with the muscle testing procedure (MTP), a procedure that has shown good interexaminer reliability.[20]

The patient was asked to make the referential statement "I'm OK, going to camp overnight" and muscle tested. The muscle test to this statement tested weak, indicating that the patient was noncongruent with this concept. The patient was then asked to continually repeat the statement while the practitioner did the MTP with one hand, as the other hand palpated the different meridian access points (MAPs) on the patient's body. Each MAP is a specific skin point, which, based on acupuncture theory,[21] is associated with certain emotions. When the patient tests strong to the statement and a MAP, then it is said that there is an emotional component related to the presenting problem. According to applied kinesiology theory,[22] meridians have a psychologic and somatic association. In this patient's case, the kidney meridian was the active MAP, which, according to the NET protocol, has an alleged association to the emotion of "fear."[16-18]

Using the MTP, the concept of an "original event" that incited his emotional response was investigated. The semantic response to the current fear was related to a past event by asking "when," "where," and "who" type of questions. This was done to uncover what appeared to be a retained psychosomatic response to a previous traumatic event.

Neuro Emotional Technique hypothesizes that stimuli associated with the original event become associated via a process of pavlovian conditioning and are then reproduced through a process of repetition compulsion.[16] In this case, the original event occurred at the time when the patient first went to preschool aged 3 years. The patient's emotional reality (a perception of reality that may not actually be true) of the event was one of feeling "abandoned" at preschool by his mother. This is said to be the "original" traumatic event that set up this conditioned response in the patient when separating from his mother.

The treatment involved the practitioner applying a somatic stimulus by using a double-headed activator over associated vertebral sequences. In this case, for example, the kidney meridian requires activation of the following vertebral sequences: T1, T5, and T9. These vertebral sequences were identified by the MAP system developed by Walker.[16] At the same time, the patient was asked to contemplate the original event and the associated feelings in his conscious mind, while holding his forehead and MAP. The practitioner used the activator to provide a mechanical force along the plane of the vertebral facets, in the posterior to anterior direction, while the patient was asked to breathe in, hold his breath, and breathe out.

Finally, the practitioner retested the referential statement "I'm OK, going to camp overnight" using the MTP. The patient (who had originally tested weak)

Table 1 Referential statements used and the outcomes of MT during the NET protocol

Referential Statement	Pre-NET MT	NET Protocol	Post-NET MT
I'm OK, Going to Camp Overnight	Incongruent	Yes	Congruent
I'm OK, Staying the Night When I'm Uncertain	Incongruent	Yes	Congruent
I'm OK, Going to Camp	Incongruent	Yes	Congruent
I'm OK, Being Hurt at Camp	Incongruent	Yes	Congruent
I'm OK, Crying and Vomiting	Incongruent	Yes	Congruent

now tested strong to the MTP and that statement and so was considered to be congruent with that concept according to NET protocol.

Other referential statements used over the course of this NET treatment are listed in Table 1.

The patient underwent 8 NET sessions in a private chiropractic facility in Sydney, Australia, between August and November 2005 lasting approximately 15 minutes each.

Two days after his last NET treatment, the patient attended a 2-night school camp. The patient reported that he experienced only minor anxiety and not his usual symptoms of anxiety before leaving for camp. According to his mother's report, he appeared calmer boarding the school bus than on previous occasions. He reported that he experienced minor episodes of anxiety, although even after trying to "will" himself into a state of anxiety, he found he could not voluntarily induce the anxious state. He enjoyed himself so much on camp that he sent a text message to his mother during the evening, expressing this. Since returning from this camp, the patient has expressed a keen interest in going to a snowboarding camp in June 2006. The patient has happily stayed the night at a friend's home and is looking forward to his next school camp. He has also expressed interest in joining cadets and is considering boarding school.

Six months posttreatment, the patient returned to his clinical psychologist for reevaluation. The patient informed her that he did not experience excessive anxiety in relation to being away from home or his mother nor was he harboring fears that something bad would happen to her. He expressed some nervousness associated with going to camp; but he no longer worried about it for months, as he did in the past. The patient reported that he attended the camp without any incident and that he was able to enjoy himself on the camp at the end of 2005, as opposed to worrying about his mother. The patient's mother also confirmed that the level of interference the anxiety had caused her son in his social and family life had reduced significantly since consulting the chiropractor. The patient's mother also confirmed that the patient was looking forward to attending an overnight cadet's camp. As a result, the clinical psychologist concluded that the patient no longer met the criteria for SAD according to the *DSM-IV*.[1]

Discussion

It is suggested in the medical literature that the ideal treatment of SAD involves a multimodal approach.[4,5,23,24] The NET protocol provides children and parents with a management approach that attempts to resolve emotional instabilities involving the child being separated from the parents. It also attempts to establish behaviors within the child, which allows them to separate from the primary attachment figure without anxiety and related symptoms.

Literature supports CBT for the treatment of anxiety disorders in children and adolescents.[25-28] Cognitive behavioral therapy helps the child to identify possible cognitive deficits and distortions, teaches them new skills, and provides them with rational thinking skills. Cognitive behavioral therapy is based on the supposition that underlying the fear or anxiety are conditioned or learned responses, which can be eliminated.[25] In most approaches, CBT involves some form of cognitive restructuring.[5,12,28] The principle of NET pairs the anxiety-provoking stimulus in the conscious mind with a somatic stimulus. Neuro Emotional Technique attempts to eliminate any negatively charged feelings or emotions associated with the anxiety-provoking stimulus.[16-18] The aim is that patients are able to leave in a position in which they can deal with internal or external stressors in a healthy way. Neuro Emotional Technique does not take the place of psychotherapy; however, it can be used as an adjunct to it and may be included in the multimodal management approach. In a review of the mental health of young people in Australia,[29] it states that the mental health services provided are insufficient to handle the number of cases and that there is a "need to develop alternative approaches to reduce the prevalence of child and adolescent mental health problems."[29] If new multimodal biopsychosocial management approaches such as NET can be validated through rigorous research

involving large cohorts, then such treatment may be an option to the public when pursuing nonpharmacologic options. These additional resources may assist in the reduction of the high prevalence rates of childhood and adolescent mental health disorders in Australia.

The present study is limited by the fact that it reports on only a single case, making it impossible to generalize these findings to other children in other settings. According to the clinical psychologist's reevaluation and the reports by the child and the parent, it appears that the NET intervention produced a successful clinical outcome for this particular patient. Other possible explanations for the patient's improvement could be that the patient spontaneously improved or that he outgrew his condition. Furthermore, it is possible that a delayed response to the CBT for the patient and his mother produced the successful outcome. Given the chronicity of his condition and the fact that the condition improved directly after the last treatment, the authors hypothesize that the improvement resulted from the NET intervention. Another viable possibility that needs to be considered is that the combination of the CBT and NET therapies produced the successful outcome for this patient.

Another limitation is that standardized questionnaires, such as the Child Behaviour Checklist[30] or the Anxiety Disorders Interview Schedule for *DSM-IV*: Child Version,[31] were not used pre- and postintervention to objectively measure the outcomes of the NET intervention.

If future research findings are positive, NET may be considered as an adjunctive treatment in those patients for whom traditional psychotherapeutic or psychopharmacologic interventions were tried and deemed unsuccessful. Given the controversy surrounding the current management approaches for children with anxiety disorders,[4,5,15,32] additional research aimed at the assessment of psychosocial interventions, such as NET, may be of value.

Conclusion

A 13-year–old boy diagnosed with SAD for 3 years, along with his mother, was treated with CBT with no apparent effect. At the conclusion of the NET intervention, the patient and his mother reported a reduction in anxiety symptoms. Six months postintervention, the clinical psychologist concluded that the patient no longer met the criteria for SAD according to the *DSM-IV*. Caution is advised in application of these findings, as this single case report cannot provide the direct causal relationship between the clinical outcome and NET. We encourage further research such as a controlled clinical pilot study to evaluate the efficacy of such an approach.

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