

## The Combination of Supportive Psychotherapy, Relaxation and Visualization Techniques with the Adjunctive Use of Clonidine in the Treatment of Claustrophobia

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### ABSTRACT

This case report describe the beneficial effects of combining supportive psychotherapy with adjunctive relaxation and visualization techniques in the treatment of a 51 year old female who experienced claustrophobia symptoms of sweating, hyperventilation, lightheadedness, nausea, shaking, fears of fainting and intense feeling of anxiety. Despite her healthy heart condition a residual symptom of accelerated heart beats continued to persist and subsided with the additional psychopharmacological treatment with the  $\alpha$ -2 adrenergic agonist clonidine. The strength of evidence supporting the use of clonidine in treating claustrophobia in this case is an anecdotal finding and could not be generalized to other patients with claustrophobia until confirmed by rigorous randomized double blind placebo controlled clinical studies.

**Keywords:** Claustrophobia, Anxiety, Supportive Psychotherapy, Relaxation, Visualization, Clonidine, Treatment

### CASE DESCRIPTION AND SYMPTOMS PROGRESSION

Ms. L is a 51 years old Caucasian female who presented to the outpatient mental health clinic of a Community Mental Health Center with various physical symptoms that affected her overall level of functioning leading to taking an extended medical leave from her job as a care giver in a nursing home that specializes in caring for elderly patients with Alzheimer's disease.

She was seeking an urgent intervention to decrease and minimize her current symptoms which included: sweating, accelerated heart beats, hyperventilation, lightheadedness, nausea, shaking, fears of fainting and an intense feeling of anxiety. These symptoms suddenly emerged when she was attending to the daily physical needs of a patient who was confined to a closed area in a bedroom that had no window and had a very tight small door. She reported that she has not experienced any of these symptoms since she was 17 years old and that at that time she was given the diagnosis of Claustrophobia. Back then she was treated with the antidepressant imipramine for about 2 months. Her parents did not like the side effects of imipramine of consistent constipation and blurred vision. She did not know if the imipramine was effective in decreasing her claustrophobia but was relieved that the symptoms of anxiety associated

with fears of being in a closed space did not reoccur until recently when her duties at the nursing home changed from providing care in an open ward to individual tight and closed space bedrooms.

Ms. L was frightened and concerned that she may lose her job as a caregiver in that nursing home because she was the main provider for her two teenage daughters since their father died unexpectedly from a massive brain bleeding due to an asymptomatic and undiagnosed brain aneurysm.

Ms. L did not smoke cigarettes or drink alcohol or use any recreational or illicit drugs. She also did not have any medical conditions and was not using any prescribed or over the counter medications, nutritional supplements, herbs or

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any vitamins. She had a complete physical examination and relevant laboratory tests which were all within normal limits including a perfectly healthy heart. She was the only child of her parents who adopted her from foster care when she was 3 years old and did not have any information about her biological parents physical and mental health conditions. She reported no history of emotional, physical or sexual childhood or adulthood abuse. After graduating from high school she worked as a nurse aid in various nursing homes to help support her ailing elderly parents and then met her husband. She became a home maker mother and remained so until her husband passing away.

During her initial assessment and evaluation at the mental health clinic she adamantly insisted that she was not willing to receive any psychiatric medications, but was seeking counseling and advice on gaining coping skills that will help her with controlling her reemerging claustrophobia.

She agreed to begin attending weekly individual supportive psychotherapy sessions that was conducted by a licensed clinical social worker.

Over a 6 weeks period she attended 45 min of weekly supportive psychotherapy sessions. The psychotherapist provided personal comfort, advises related to coping skills and encouraged Ms. L with persistent reassurance that she is a competent and well experienced nursing home care giver. The supportive psychotherapy sessions were mostly devoted to attentive and sympathetic listening to the pervasive concerns and fears of the reoccurrence of claustrophobia if she would to return to her nursing home employment. The psychotherapist also helped with completing the needed forms to allow Ms. L to utilize her sick leave time, so she can continue to receive a temporary disability income.

Ms. L began to experience a noticeable decrease in the intense feelings of anxiety and acquired a general sense of calm and content .She also felt freedom from the claustrophobia symptoms of sweating, hyperventilation, lightheadedness, nausea, fears of fainting when she motivated herself to voluntarily enter closed spaced areas such as her clothes closet, her windowless bedroom and the attic. She was concerned about the ongoing occurrence of accelerated heart beats and the intense body shaking.

The psychotherapist introduced various coping techniques that included relaxation and guided visualization of imagining that she was right back in the closed space bedroom at her nursing home place of employment.

Ms. L practiced techniques of slowing her breathing down while closing her eyes and letting go of any tension that she felt throughout her body. With the ongoing sessions of supportive psychotherapy she also was able to relax her body and mind even further. She also experienced beneficial effects from gaining skills in practicing progressive muscle relaxation exercises before beginning the process of visualization.

The relaxation and visualization practices led to a marked decrease in the claustrophobia symptoms of intense body shaking; however the accelerated heart beats persisted despite the absence of any physical or cardiac conditions that could lead to that symptom.

Ms. L felt supported and with her psychotherapist's encouragement and empathic rapport she agreed to be referred for a psychiatric evaluation for the possibility of adjunctive medication treatment.

She then met with this writer who provided education about various medications that could help decrease the accelerated heart beats and especially in the context of the additional symptoms of generalized anxiety as she only had one week left of her accumulated sick leave and was under pressure to return back to work.

Since there was no specific FDA approved medications for the treatment of claustrophobia, this writer suggested the use of either antidepressants or antianxiety medications [1], which Ms. L refused to consider. He also mentioned that sometimes medications that are used for the treatment of hypertension or heart condition such as propranolol [2] or clonidine [3] have helped some patients who have anxiety symptoms that are manifested by the feelings of accelerated heart beats in a perfectly healthy heart. She chose clonidine because she recalled that one of the patients at her place of employment, who was treated with propranolol, seemed to be always tired and had ongoing sleep difficulties [2].

Ms. L consented to treatment with clonidine with a full awareness of all its potential side effects which may include drowsiness, fatigue, hypotension, lethargy, sedation, headache, upper abdominal pain and dizziness [3]. Treatment commenced with clonidine at the minimum dose of 0.1 mg to take every morning to which she did not experience any adverse effects. On day 7 of clonidine treatment she practiced 3 sessions of guided visualization with the support of her psychotherapist. During each of the 3 sessions, she visualized herself as being in the same small closed space nursing home bedroom where she had experienced the claustrophobia symptoms.

Ms. L was overwhelmingly surprised and using her own word "a miracle had occurred!" There were no more feelings of accelerated heart beats.

At the time of writing this case report, Ms. L has been 12 weeks free from the claustrophobia symptoms of sweating, accelerated heart beats, hyperventilation, lightheadedness, nausea, shaking, fears of fainting and another intense feeling of anxiety. She has been able to resume her employment and performed her assigned duties in small closed space bedrooms without any recurrence of claustrophobia symptoms.

She does not feel comfortable with getting of clonidine yet. She is keeping frequent contacts via telephone calls and

secure e-mail communications with her supportive psychotherapist. She is also practicing relaxation and visualization techniques as needed.

## DISCUSSION

Claustrophobia is a condition characterized by the development of intense feelings of anxiety, fear or panic in enclosed spaces or in situations with physical restriction. The symptoms of claustrophobia may include sweating, trembling, hot flashes, shortness of breath, hyperventilation, accelerated or rapid heartbeat, chest tightness or pain, nausea, feeling faint or lightheaded, feeling confused or disorientated and experiencing body shaking [4]. The most common triggers for claustrophobia include being in small rooms, or locked in a windowless room, riding elevator, driving on a congested highway and while undergoing Magnetic resonance imaging (MRI) scanners [5]. Some patients with claustrophobia might find it difficult to breathe in closed auditoriums, theatres and crowded unfamiliar public places. The symptoms of claustrophobia can be mild, such as trembling and sweating or severe, such as rapid or accelerated heartbeat, fainting or full blown panic attack. Although claustrophobia can cause panic attacks, it is not the same disorder [5]. Claustrophobia is considered one of the most common types of phobias with a prevalence of about 4% of the population and most patients experience mild rather than the severe manifestations of its symptoms [6]. Like several psychiatric disorders, claustrophobia has genetic predisposition and can develop due to childhood and adulthood traumatic events [7]. For some patients, claustrophobia may undergo a period of remission without any specific interventions while others may require long term treatment to manage and cope with the symptoms [8].

There is several possible psychotherapeutic treatment interventions for claustrophobia which includes: Cognitive behavioral therapy (CBT), where the psychotherapist engage with the patient in identifying then control and alter negative thoughts that arise from situations that trigger the claustrophobia symptoms [9]. By practicing changing of the thoughts, patients then learn to change their reactions to the situations that trigger the symptoms of claustrophobia [9].

Rational emotive behavioral therapy (REBT) is another form of CBT that focuses on the present. REBT addresses the intense anxiety feelings and resulting behaviors by using the "disputing" a technique to help patients develop realistic beliefs to counteract the irrational fears of closed spaces [10]. REBT is considered more action-oriented than CBT [9,10].

Exposure therapy (ET) this type of therapy is commonly used to treat anxiety disorders and phobias. In ET the patients are placed in a non-dangerous situation that triggers the symptoms of claustrophobia in order to confront and overcome the intense feelings of anxiety and fear [11]. The more the patients are exposed to what they fear, the less will

be the fear. Systematic desensitization can be a component of ET where patients are being gradually and repeatedly exposed to the claustrophobic situations until they are no more fearful of these situations [12]. Flooding is a type of ET in which patients are exposed to the main triggers of their claustrophobia symptoms until all the symptoms subside [8].

Supportive Psychotherapy is an approach that integrates various therapeutic support modalities with the aim of reducing and relieving the intensity of the presenting symptoms, distress or disability. It also helps patients reduce the extent of the behavioral disruptions caused by their symptoms. The psychotherapist reinforces patient's adaptive behaviors by engaging in a fully emotional, encouraging, and supportive relationship especially in the context of providing techniques and interventions that would specifically reduce the intensity of their symptoms [13,14]. The psychotherapist could also integrate other therapeutic techniques that could contribute to the remission of the claustrophobia symptoms such as relaxation [15] and visualization [16]. In this adjunctive intervention, the psychotherapist would offer different relaxation and visualization techniques to use when the claustrophobia symptoms emerge.

Ms. L responded favorably to supportive psychotherapy and the adjunctive use of relaxation and visualization. These therapeutic interventions led to the remission of most of her claustrophobia associated symptoms except for the feelings of accelerated heart beats which required the addition of a psychopharmacological intervention.

Some patients may require the addition of psychopharmacological agents, usually antidepressants or anti-anxiety medications to reduce the physical symptoms of claustrophobia [17]. However Ms. L decided to choose clonidine although it has not been approved for that purpose.

Clonidine hydrochloride which is an imidazoline derivative which acts centrally as  $\alpha$ -2 adrenergic agonist [18]. It is considered non-selective because it also binds to  $\alpha$ -2A, B and C subtypes. The chemical name for clonidine is 2-((2, 6-dichlorophenyl) amino)-2-imidazoline hydrochloride. As an  $\alpha$ -adrenergic agonist in the nucleus tractus solitarius (NTS) it excites a pathway that inhibits excitatory cardiovascular neurons [18]. Clonidine has also  $\alpha$ -antagonist effects in the posterior hypothalamus and medulla. It acts pre-synaptically to reduce sympathetic outflow and hence, decreasing cardiac output, peripheral vascular resistance and blood pressure. It specifically targets  $\alpha$ -2 receptors in the brainstem vasomotor center, decreasing presynaptic Calcium levels and release of nor-epinephrine [19,20]. It may also reduce plasma renin activity and catecholamine excretion. The final outcome of clonidine response is the reduction of the sympathetic outflow from the central nervous system (CNS) which contributes to its antihypertensive action [20].

Clonidine is FDA approved for the treatment of hypertension and its long-acting formulation approved for treating attention deficit hyperactivity disorder [17,21,22]. Clinically it has been used in the treatment of anxiety disorders, posttraumatic stress disorder, tic disorders such as Tourette syndrome, restless leg syndrome, migraine headaches, diarrhea and certain cancer-related pain conditions and in the management of withdrawal symptoms associated with the discontinuation of substance such as alcohol, opioids or nicotine [23]. Moreover, clonidine could help in the treatment of neuroleptic-induced akathisia, stimulant-induced insomnia and clozapine-induced sialorrhea. It has also been tried in treating menopausal flushing, syndrome and psychogenic polydipsia [24].

Although the strength of evidence supporting the use of clonidine in various psychiatric conditions including claustrophobia is highly anecdotal and has not been confirmed by rigorous randomized double blind placebo controlled studies. Ms. L favorable response to clonidine effects on treating her claustrophobic symptoms of feelings of accelerated heart beats not yield the same outcome in other patients with claustrophobia [25].

## CONCLUSION

This case report describe the condition of a female patient who experienced claustrophobia symptoms of sweating, accelerated heart rate, hyperventilation, lightheadedness, nausea, shaking, fears of fainting and an intense feeling of anxiety. Although she had an episode of claustrophobia when she was 17 years old, she did not have any other episodes until she was 51 years old while working as a care giver in a nursing home while attending to the daily physical needs of a patient who was confined to a closed area in the bedroom that had no window and had a very tight small door. The case illustrates a treatment strategy combining supportive psychotherapy with adjunctive relaxation and visualization techniques which led to the remission of the claustrophobia symptoms of sweating, hyperventilation, lightheadedness, nausea, shaking, fears of fainting and an intense feeling of anxiety. The accelerated heart beats symptom continued to persist until she received treatment with the  $\alpha$ -2 adrenergic agonist clonidine. Clonidine led to the remission of the accelerated heart feeling. The strength of evidence supporting the use of clonidine in treating claustrophobia in this case is only an anecdotal outcome and could not be generalized to other patients with claustrophobia until confirmed by rigorous randomized double blind placebo controlled clinical studies.

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## CONFLICT OF INTEREST

No conflicts of interests. The materials described in this manuscript are those of the author and do not reflects the views of the Department of Veterans Affairs or the VA Northern California Health Care System or the Department of Psychiatry and Behavioral Sciences, UC Davis, Medicine, Sacramento, California.

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