

EMDR Treatment of Children and Adolescents With a Choking Phobia

Carlijn de Roos

Psychotraumacentre for Children and Youth, GGZ Rivierduinen, The Netherlands

Ad de Jongh

Academic Centre Dentistry Amsterdam, University of Amsterdam, The Netherlands

Given the limited number of reported cases in literature, it might be concluded that it is rare to develop a choking phobia in childhood. However, it appears as though confusion in terminology and the time lapse between the onset of the disorder and treatment often results in the diagnosis being missed. In this article, we discuss a review of the clinical symptoms, differential diagnosis, comorbidity, etiology, and treatment options for choking phobia. We present a case series, describing the successful EMDR treatment of choking phobia for 4 children and adolescents, with positive outcomes achieved in 1 or 2 sessions. In addition, a detailed transcript is presented of a 15-year-old girl with a choking phobia related to an incident that occurred 5 years previously. The rapid elimination of symptoms in all 4 cases indicates that EMDR can be an effective treatment for choking phobias resulting from previous disturbing events. Randomized research on this promising intervention is strongly suggested.

Keywords: EMDR; specific phobia; choking phobia; children; adolescents

Development-related fears are normal in childhood (Field & Davey, 2001). During infancy, children tend to fear stimuli within their immediate environment such as loud noises, objects, and separation from a caretaker. When, however, a fear continues and is provoked by the presence or anticipation of a certain object or a specific situation, then one speaks of a specific phobia (American Psychiatric Association [APA], 2000). The prevalence reported in the literature shows a large bandwidth, ranging from 1.7%–16%; however, most studies suggest a prevalence rate between 7%–9% (Silverman & Moreno, 2005).

An example of a well-defined phobic condition is swallowing phobia, also known as choking phobia, an extreme fear of choking. Since 1980 there have only been a few publications about choking phobia in adults, children, and/or adolescents. Epidemiologic data about the prevalence of choking phobia are lacking. An important reason seems to be that the disorder can hide behind diagnostic labels all related

to swallowing problems. Over time, professionals from various disciplines, such as general practitioners, otorhinolaryngologists, pediatricians, neurologists, psychiatrists, and psychotherapists have given different names to the same phenomenon: *choking phobia*, *fago phobia*, *disphagia*, *traumatically acquired conditioned dysphagia*, *posttraumatic eating or feeding disorder*, *childhood onset eating disorder*, and *food avoidance emotional disorder* (Bailly & de Chouly de Lenclave, 2005). In short, the use of a term for one and the same disorder largely depends on the diagnostician and is thus a poor reflection of the underlying pathology. Also, due to the wide variety in names, the choking phobia often appears to be unrecognized. After an extensive literature study, McNally (1994) states that so far only 25 case descriptions of adult choking phobics had been published. Although descriptions of choking phobic children are more or less completely lacking, Bailly and de Chouly de Lenclave (2005) report a total of 36 cases, of which 6 are adults and 30 are children or adolescents. These include cases published earlier as

well as their own clients who met the DSM-IV criteria of choking phobia and whose problems originated in childhood or adolescence.

Not much is known about the treatment of choking phobia. Due to the confusion in terminology described earlier, among other factors, not one controlled trial has yet been carried out to evaluate the treatment of choking phobia. Furthermore, it appears that a simple specific phobia is rarely a reason for referral to a medical institution. There seems to be a misconception that such a specific fear is a normal experience in development and not a condition associated with functional impairment. Some available case histories provisionally support the use of a wide diversity of therapeutic approaches (Bailly & de Chouly de Lenclave, 2005). Remarkably, in many cases treatment starts at quite a late stage, where the time lapse between the onset of the disorder and treatment ranges from 2 to 45 years, with an average of nearly 12 years.

As for the use of EMDR, there are only three known published cases. These involve the successful treatment of an adult who nearly choked after a jaw operation while being treated at the intensive care unit (de Jongh & Ten Broeke, 1998) and an adult who developed a severe choking phobia following an allergic reaction to an herbal beverage (Schurmans, 2007). The third case concerns the description of treatment of a 7-year-old girl (Lovett, 1999).

The present article gives the reader an impression of the possibilities of EMDR for children and adolescents with choking phobia. This is illustrated by means of an overview of a number of children treated in this manner and a verbatim of a case.

Clinical Symptoms

Choking phobia is characterized by a disproportionate fear of choking on food, pills, or beverages (de Jongh & Ten Broeke, 1998; de Jongh, Ten Broeke, & Renssen, 1999). Swallowing is avoided or postponed out of fear of choking, and there is no medical reason for the reported difficulty in swallowing. Basic consequences of a choking phobia are avoiding food, pills, and beverages, avoiding eating in the presence of others, and corresponding weight loss. Characteristic behavior for children with a choking phobia is protracted chewing on a small bite, hiding food, or flushing food down the toilet. They may hold food in the cheek or only accept fluids or liquid foods, such as yogurt and custard. Providing reassuring information to parents and children about the lack of an underlying medical cause does not decrease complaints of fear. Obviously, malnutrition, which is the result of avoiding

food intake for a long period of time, has a deleterious effect on the child's physical well-being. When the child does not take in sufficient nutrients, malnourishment and drastic weight loss can disrupt metabolism, producing medical disorders similar to those found in anorexic patients. Long-term effects of malnourishment may include damage to vital organs, such as the kidneys (Banerjee, Bhandari, & Rosenberg, 2005).

Choking phobia often also has severe detrimental social consequences for the child and the other members of the family. Children with complaints of choking phobia avoid experiences in which food plays a part, and as a consequence they start avoiding social interaction. Consequently, it can be difficult for a family to visit other people, go to a restaurant, or go on holiday. Many parents find it a heavy or even unbearable burden to witness their child struggle and gag at the table. Despite all their efforts to change this behavior, they see their child lose weight and feel helpless and frustrated.

It should also be noted that an extreme fear of choking does not necessarily mean that the complaints only or mainly pertain to eating. For example, de Jongh (2000) described a case of a woman who, after a severe panic attack in an MRI scan, refused subsequent dental treatments because of a severe fear of choking.

Classification and Differential Diagnosis

In specific phobia classification, choking phobia is found within the subclassification of "other types" (APA, 2000). According to the definition in the *Diagnostic and Statistical Manual of Mental Disorders – Text Revision* (DSM-IV-TR), one speaks of a specific phobia, such as choking phobia, when the person suffers a continuous fear caused by the presence or anticipation of a specific object or situation. If at all possible, the stimulus is avoided or undergone with intense fear or suffering (Silverman & Moreno, 2005). Exposure to the feared situation nearly always causes an immediate reaction of fear, which sometimes manifests itself as a panic attack (APA, 2000).

The classification of disorders and syndromes provides a clear picture of the symptomatology, which is important because of the therapeutic implications. For instance, in case of a specific phobia, such as a choking phobia, DSM-IV-TR requires that the fear condition not be attributed to any other psychological disorder, such as obsessive-compulsive disorder, posttraumatic stress disorder, fear of separation disorder, social phobia, a panic disorder with agoraphobia, or agoraphobia without panic disorder in the case

history. An example: Fear of choking is not a specific phobia if the child meets the criteria for panic disorder and when swallowing is afraid of having a panic attack (Banerjee et al., 2005). To differentiate on the basis of symptomatology and to be able to make a difference between choking phobia and other disorders, Table 1 provides an overview of the most relevant differential diagnostic considerations (see also McNally, 1994).

Comorbidity

Choking phobia often occurs in combination with other psychological disorders. In 80% of children with a choking phobia, the presence of at least one other psychological disorder is reported (Bailly & de Chouly de Lenclave, 2005). Anxiety disorders are the most prevalent in this context. In about three-fourths of the children, one or more other anxiety disorders, in addition to choking phobia, can be diagnosed. For one in three children, this is separation anxiety, while approximately 25% of the children suffer from another specific phobia, and one in five children with a choking phobia have also experienced, at one point, a panic disorder with or without agoraphobia. The category of anxiety disorders is not the only type of comorbid pathology:

Slightly less than 25% of the children also suffer a mood disorder (Bailly & de Chouly de Lenclave, 2005).

Etiology

The bibliography and inventory of published cases show that choking phobia usually starts in childhood and adolescence. In addition it appears that choking phobia is more prevalent in boys and men. This contrasts with other types of specific phobias, which have a higher prevalence in girls and women (APA, 2000; Craske, 2003; Davey, 1997). There are no indications that the disorder arises or manifests itself at a particular critical age. Nevertheless, the onset of choking phobia complaints is easy to identify as opposed to a number of other specific phobias. McNally (1994) stated that in nearly all cases complaints arise after a direct conditioning experience. This could be an incident where one chokes on food or pills or an experience with vomiting, where one fears choking. According to the case history published by Bailly and de Chouly de Lenclave (2005), a little over half of the cases deal with a near choking incident involving food or pills.

Witnessing a choking incident involving friends or other significant people can be frightening, and for one in five children such an event preceded the onset

TABLE 1. Differential Diagnosis of Choking Phobia

Alternate Disorders and Their Characteristics		Characteristics of Choking Phobia
Extreme gagging reflex	Gagging urge, especially when the back of the mouth is touched. Not necessarily scared of choking.	Fear of choking is central. Usually no hypersensitivity for gagging.
Dysphagy	Difficulties swallowing. Usually no anxiety response.	Fear of choking rather than a fear of not being able to swallow is central.
Globus hystericus	Feeling of lump in throat. Usually no reaction of fear.	Fear of choking. The sensation of a lump in throat is in this case not necessarily present.
Food phobia	Aversion to certain kinds of food. Is paired with gagging and urge to vomit.	Anxiety, instead of gagging and nausea, is central. Not linked to the taste of certain foods.
Anorexia nervosa	Avoiding food out of fear of gaining weight. Weight loss is experienced as a positive thing.	Avoiding food out of fear of choking. Weight loss is experienced as a negative thing.
Panic disorder	Idea and sensation of choking during panic attack, not provoked by food.	Fear while taking in food, drink, or pills.
Social phobia	Fear of eating in the presence of others.	Having people around gives a greater feeling of safety.
Posttraumatic stress disorder	Intrusive reasoning about earlier experience.	No intrusions, mainly fear of situations that can lead to choking in the future.
Obsessive-compulsive disorder	Fear of accidentally swallowing objects while eating, which could point at obsessive controlling behavior.	Fear of choking on food itself is central.

of their choking phobia. Also, medical or dental treatment is sometimes related to the development of the disorder. Cases where no specific experience or *trigger* can be established are very rare (McNally, 1994).

Throughout the years many different hypotheses have been developed about the underlying causes or mechanisms that may lead to a specific phobia. These are based on the theories of classic conditioning, operant conditioning, and social learning (Davey, 1997; Himle, Crystal, Curtis, & Fluent, 1991; Rachman, 1977, 1990).

1. **Classic conditioning:** This theory assumes that a choking experience (unconditioned stimulus) and the corresponding fear of dying became associated to the food or the object that caused the near-choking experience (conditioned stimulus). This results in a conditioned response to the food and swallowing in which the latter serves as predictor for a choking experience.
2. **Operant conditioning:** A child who is scared to choke on food will be tempted to avoid swallowing. The decrease in fear resulting from the behavior of avoidance has a confirmed effect. Thus, the phobic response is maintained and continued.
3. **Social learning:** An observation of a (near-)choking experience of other people or the conveyance of frightening information can provoke the fear of this happening to oneself. This latter form of conveyance of frightening information takes place, for instance, when parents constantly warn the child and point out the dangers of possibly choking on food.

As seen with other phobias, the development of a choking phobia is also believed to be related to genetic factors, previous stressful life experiences, and parental behavior, including parental overprotection (Bailly & de Chouly de Lenclave, 2005; Muris & Merckelbach, 2001). As for this latter factor, the refusal of food and seeing a crying and panicky child can be a source of great concern to the parents. Depending on the parents' history and their resulting "sensitivities," they will respond more or less adequately to their food-refusing child. Some parents will be tempted to pressure the child to eat out of fear that the child will become malnourished. This strong focus is often counterproductive because it does not lead to the child starting to eat but to a power struggle between child and parents. It may also lead to avoidance behavior by the parents, in which, for instance, they spend a lot of time to prepare special foods for the child or decide to withdraw the child from school. Although these reactions understandably arise from feelings of desperation and helplessness, this behavior has a detrimental

effect on the complaint pattern as it maintains the fear and the pattern of avoiding eating.

Treatment

As we mentioned before, controlled studies are not available, and specific evidence as to the efficacy of treatments for children is lacking altogether (Chorpita, Vitali, & Barlow, 1997). From the inventory of the case descriptions by Bailly and de Chouly de Lenclave (2005), it appears that psychosocial treatments prevail, although pharmacological interventions also occur. Generally, the interventions described aim to decrease the fear of choking and, through this, to increase the intake of food and to up the body weight. In three-quarters of the cases, cognitive-behavioral therapy was used either on its own or in combination with other treatments. Other frequently used interventions are hypnotherapy and pharmacotherapy. The cognitive-behavioral therapies used for choking phobias consist of a combination of different procedures, such as psychoeducation and cognitive restructuring, which aims to change attitudes and beliefs related to swallowing. Other methods include relaxation training, desensitization, and in vivo exposure. In vivo exposure first requires a hierarchy of feared foods to be identified, after which the practitioner offers these foods in a gradual manner. During exposure to the food, clients work on decreasing the number of chewing movements per bite, reducing the use of fluids or drinks to "wash down" their food and/or decreasing the grinding of food. In the cognitive behavior therapeutic approach, techniques such as positive reinforcement, shaping, and modeling are also used.

As for pharmacological intervention, antidepressants (tricyclic or SSRIs), anxiolytics, and antipsychotics are prescribed, sometimes in combination with cognitive-behavioral therapy. In this manner, Banerjee et al. (2005) describes the cases of three children with severe choking phobia who showed rapid symptom reduction after a low dose of SSRI medication.

EMDR for Choking Phobia

Indication for Treatment

EMDR is a therapeutic procedure for the processing of frightening, significant memories. It always starts from the hypothesis of the practitioner about the correspondence between earlier experience and the client's present problems (Shapiro, 2001). When the practitioner, on the basis of his case conceptualization, assumes that earlier horrific experiences are

relevant to the creation and continuation of the current problems, then EMDR may be considered a treatment of choice.

In the treatment of specific fears or phobias, a distinction can be made between phobias with a traumatic history of development, also called trauma-related phobias, and phobias without such a background (de Jongh et al., 1999; de Jongh & Ten Broeke, 2007; de Jongh, Van den Oord, & Ten Broeke, 2002). The trauma-related phobia has a clear beginning, which is recognized by the client. This can be a specific, distressing, or dramatic experience in which the fear originated. In this type of phobia, it may be assumed that confrontation with the phobic stimulus resulted in an activation of the traumatic experience. Because a mnemonic representation of the activated recollection of the experience still entails a strong affective response, tendencies of avoidance are continued.

It appears from literature and clinical practice that most choking phobias are related to a frightening experience, for example, a near-choking experience. Also to be considered is the effect of seeing someone else go through this or a similar experience (even on TV!) or the impact of (horror) stories told by others. It will be evident that for children these two so-called “*pathways of fear*” are relatively important in terms of EMDR targets (Rachman, 1977). EMDR is one of the first therapeutic options considered for desensitizing or dealing with fear-inducing memories. It may be assumed that influencing and resolving these memories leads to a change in complaints. The dynamics of the complaints reveal great similarity to those of posttraumatic stress disorder, in which the symptoms (reliving the moment, etc.) can be explained from the traumatic experience in a direct manner. If the patient cannot identify a conditioned experience or other crucial memory that controls the choking fear complaints, EMDR is definitely not indicated. In this case behavioral therapy should be preferred (Davey, 1997; Rachman, 1990).

The EMDR Phobia Protocol

A specific EMDR phobia protocol is available to desensitize the traumatic memories (de Jongh & Ten Broeke, 2006; de Jongh et al., 1999; Shapiro, 2001). The protocol consists of six steps that are adjunctive to the eight phases of EMDR’s standard protocol (Shapiro, 2001).

Steps 1, 2, and 3: Desensitization of Target Memories

The first three steps consist of the consecutive desensitization of three target memories by means of the

standard eight-phase EMDR protocol. The steps are (a) desensitizing the first memory in which the fear complaints occurred, (b) desensitizing the most painful memory, and (c) desensitizing the memory of the most recent experience, in which the fear complaints manifested themselves. For some children, these three targets may be represented in one terrifying memory.

Step 4: Future Template

Clients with a phobia often avoid certain situations or circumstances that trigger memories of the traumatic experience. After processing the original experience(s), the client will, however, once again have to confront these kinds of situations. Therefore, treatment is also aimed at preparing the client for these possible fear-inducing, future situations. This especially applies to the anticipation fear of confronting certain objects, places, or persons who have become strongly linked to the memory by the traumatic experience. When all target memories that may reasonably be assumed to drive the complaints are desensitized, the practitioner installs a *future template*. In case of a choking phobia, the template involves daily recurring eating situations and the continuation of the “normal” eating pattern. The client thinks of a future situation and combines this with a positive statement (about himself or herself) in combination with a set of bilateral stimulation. The basic assumption underlying the use of this imagination-based procedure is that it helps break through unnoticed avoidance behavior. More concretely, the practitioner asks the client in this order:

1. To form a “paused” image of a situation that is still perceived or avoided with fearful tension. This is a picture of the desired situation without catastrophic aspects.
2. To think of this image and to combine with the standard positive cognition (PC): “I can handle this.”
3. To estimate the felt believability of this standard PC on a *Validity of Cognition* (VoC) scale (where 1 = not true and 7 = completely true).
4. To keep thinking of both the image and PC in combination with sets of bilateral stimulation, until the VoC is at a maximum.

Step 5: Video Check

The practitioner asks the client to play a video of a future situation in his or her mind. The purpose of this is to examine the situation again in terms of possible fear-provoking aspects in a precise and detailed manner. When the client feels tension, he will indicate this, and eye movements are intro-

duced in combination with the standard PC “I can handle this.”

Step 6: In Vivo Exposure and Behavioral Experiments

Finally, the result of the EMDR intervention is tested in the form of a confrontation with the fear-provoking stimulus in a realistic situation. The point is that the client “just does it.” The goal of this is to further disconfirm or negate possible remaining dysfunctional ideas. When the desired behavior has been carried out successfully, the behavior will normalize and self-confidence will grow.

Case Series

Table 2 presents an overview of four children and adolescents with a choking phobia. All of them underwent EMDR treatment according to the protocol described above. The data are based on information from both parents and child, as well as on clinical diagnostics. Although no data from empirically based measures are available, the behavioral reports provide a clear description of treatment outcomes.

Table 2 shows children from different developmental phases in which, in all cases, an identifiable experience occurred before the development of the choking phobia. This experience differed in “objective” severity and ranged from being told a story of a stranger nearly choking to the person himself nearly choking on a candy ball. From this, one can conclude that the subjective experience of the incident is more defining than the “objective” experience. The time lapse between the experience and treatment varied substantially, from 3 weeks to 5 years. The suffering for each entire family was great, without exception. The table indicates whether the case concerned a disturbed power hierarchy between parent and child or earlier problems between child and parents.

In all cases an introductory interview with parents and child took place prior to treatment. From these interviews it appeared that the “near choking incident” was directly related to (or had a *driving control over*) the complaints. Because further diagnostics were no longer indicated at that point, and also in view of the suffering, treatment was started immediately. The EMDR targets offered in the treatment are given, as is the number of sessions. Remarkably, it concerned a very limited number of sessions in all cases, in most cases two sessions of a maximum of 1 hour.

Parents played an active role in that they provided information during the intake and observed the be-

havior of their child at home between the treatment sessions. In the cases of the 3-, 4-, and 15-year-old children as mentioned, the mother or father was present during the treatment to promote the child’s sense of security. This allowed the EMDR process to take place under optimal conditions.

In the event of disturbed parent–child interaction, advice aimed at normalizing the eating behavior during the short evaluation moment at the end of the treatment session was given. In addition to being given feedback on the course of the EMDR session, parents were also advised on their desired attitude and behavior. This advice included limiting the time to eat; ignoring choking, swallowing, or gagging sounds; enforcing desired behavior; and controlling their own emotions. Here the basic assumption was that parental tension would decrease by itself when, due to effective treatment, their child’s fear complaints decreased. The parents responded positively and expressed confidence that they could actually correct their “upbringing routine.” All parents seemed capable of quickly putting the advice into practice, even if problems in child rearing had been an issue over a longer period of time.

The result of this short-term treatment was that the eating pattern normalized for all children, and they all gained weight. Furthermore, they reported feeling more energetic and happier. Parents reported an increase in initiative and independence. There were still some remaining complaints in cases 2 and 4 after the EMDR treatment. These seemed to stem from separation–individuation issues that had existed for a longer period and that may have been related to parenting problems and the disturbed hierarchy of power. After a limited number of interviews with the parents, these treatments were concluded as well. One parent was referred to the psychological health department (GGZ) for adults.

Case of Maggy: Near-Choking Experience on Candy Ball

Maggy (15 years old) was referred to a child and adolescent department via the general practitioner with swallowing problems, weight loss, fatigue, headache, stomachache, hyperventilation, and frequent absence from school. The swallowing complaints had gradually increased and intensified after a period of having a sore throat 2 years ago. The reason for seeking help was that Maggy had retreated more and more and did not want to go to school anymore. Her parents were desperate, and there was great tension during meals at home. They were constantly watching Maggy and responded in panic to every sound that she made. A near-choking

TABLE 2. EMDR Treatment of Four Children and Adolescents With Choking Phobia With Information About Background and Treatment

Client	Incident	Complaints	Parent-Child Interaction	Other Stress Factors/ Earlier Problems	EMDR Targets	Number of EMDR Sessions	Result
Boy, 3 years old.	Choked on candy (3 weeks ago).	<ul style="list-style-type: none"> Weight loss due to decreased intake of food. Only eats fluids. Wearry mood. Rebellious. 	No special remarks.	<ul style="list-style-type: none"> Easily fearful. 	<ul style="list-style-type: none"> Choking on candy (storytelling by mother). Child's own associations. 	2	<ul style="list-style-type: none"> Eating pattern normalized. Increase in weight. Happier mood. Less rebellious.
Girl, 7 years old.	Heard story about someone choking on their own tongue. Complaints increased after a period of vomiting (a month ago).	<ul style="list-style-type: none"> Weight loss due to decreased intake of food. Fear that food will go down the wrong way and fear of dying. Avoids swallowing, spits out food in toilet, keeps food in cheek. Melancholic, does not feel like social interaction. Withdrawn, shows little initiative. Insecure, fear of failure. 	Disturbed hierarchy of power.	<ul style="list-style-type: none"> Easily fearful. Always was a poor eater. 	<ul style="list-style-type: none"> Story of someone choking on their own tongue. Memory with current strongest fear of choking. 	2	<ul style="list-style-type: none"> Eating pattern normalized. Increase in weight. Happier mood. More independent, takes more initiative, is more assertive.
Girl, 9 years old.	Witnessed a friend nearly choking on candy (6 months ago).	<ul style="list-style-type: none"> Severe weight loss due to decreased intake of food. Avoids swallowing, chews excessively, hides food in house, and spits out food in toilet. 	No special remarks.		<ul style="list-style-type: none"> Witnessed friend nearly choking. On a drip at the hospital. 	2	<ul style="list-style-type: none"> Eating pattern normalized. Increase in weight.
Girl, 15 years old.	Near-choking experience in candy ball (5 years ago). Complaints have increased after a period of throat complaints.	<ul style="list-style-type: none"> Weight loss due to decreased intake of food. Only eats fluids. Avoids swallowing, gagging at table, spitting. Various somatic complaints: fatigue, pains, hyperventilation. Frequent absence from school. 	Disturbed hierarchy of power.	<ul style="list-style-type: none"> Actual danger at school. Mother has complaints of depression. 	<ul style="list-style-type: none"> Near-choking experience on candy ball. 	1	<ul style="list-style-type: none"> Eating pattern normalized. Increase in weight. More energetic and rebellious. Less absence from school.

incident that had occurred 5 years previously was not mentioned in the referral information nor by Maggy or her parents during the intake/registration process.

Further assessment by the multidisciplinary staff established that this concerned a choking phobia. In addition, it concerned separation-individuation problems and a disturbed power hierarchy between parents and child. Maggy was first offered EMDR treatment for the choking phobia. This treatment takes 45 minutes, after which swallowing complaints and eating problems disappear. After this, treatment shifted to focus on the family problems.

The memory of the near-choking experience was the first memory in which the fear complaints occurred, but this was actually also Maggy's most horrible memory. In this article one can find the verbatim report of the whole desensitization phase along with a description of the course of the other steps of the phobia protocol. Prior to this, the EMDR procedure had been explained to Maggy. At her request, her mother was present during the session. Eye movements were used as bilateral stimulation.

Assessment Phase

The most charged moment of the near-choking experience was the moment that the candy ball got stuck in Maggy's throat. In this "paused" picture, Maggy was standing on a playground with a woman passing by. The relevant negative cognition with regard to herself was: "I am powerless." The desired thought she would rather have with this picture was: "I can handle this," the VoC score being 2. When she focused on the selected image, she felt fearful. Maggy had a disturbance rating of 9 (score on Subjective Units of Disturbance [SUD]) and felt the tension in her throat especially.

Desensitization Phase (Overall)

After the practitioner told her to concentrate on the elements mentioned above, a set of eye movements (EM) followed. After each set of eye movements, the practitioner asked what she noticed or what came to mind. When nothing came to mind or if she mentioned the same association, the practitioner went back to the picture as it now came to mind ("*back to target*"). Thus it can be "measured" how much tension the picture still gives her now. In the following transcript a set of EM with dual attention on the memory is indicated by *****

M: That I become less scared when I think back to it.

T: Continue.

M: Nothing.

T: Then we will go back to the picture for a moment. How uncomfortable do you still feel, looking at the picture? Give it a mark between 0 and 10 in which 0 means "not uncomfortable at all" and 10 "the most uncomfortable."

M: An 8.

T: What in this picture makes it an 8?

M: That the lady is not able to get it out (Maggy places hand on her chest).

T: Concentrate on this.

M: That I am not so sad anymore.

T: And now?

M: I am not as scared anymore when I think back to it.

T: And now?

M: The same.

T: Then we will go back to the picture. How uncomfortable do you still feel, looking at the picture? Give it a mark between 0 and 10, in which 0 means "not uncomfortable at all" and 10 "the most uncomfortable?"

M: A 7.

T: Why is it a 7 now?

M: Because I could no longer catch my breath.

M: Because I called for that lady and I had no breath, and luckily she heard me.

M: Nothing.

T: Back to the picture again, do you see it in front of you clearly? Which mark do you now give for how uncomfortable it feels, from 0 to 10?

M: A 6.

T: What is the most uncomfortable thing in this picture now?

M: That this ball went into my throat, I could no longer get any air and that I shouted "help."

T: What do you notice?

M: That it is becoming less.

T: And now?

M: It is yet even less.

T: And now?

M: Nothing.

T: Then I will ask you to look at the picture once again. Do you see it? Give a mark for how uncomfortable it still feels now, 10 means the most uncomfortable and 0 means not uncomfortable at all.

M: A 5.

T: What makes it still a 5?

M: That she pressed it out (she presses down on her own diaphragm).

T: What is so bad about that?

M: That it hurts.

T: Concentrate on this.

M: That the ball is out of my throat now.

T: And now?

M: Nothing.

T: When you look at the picture, how much tension does it still give you now?

M: A 4 or 3.

T: What mark do you pick, a 4 or a 3?

M: A 4.

T: What still makes it a 4?

M: That I feel tense, I spit it.

T: And now?

M: Nothing.

T: Back to the picture once again. How disturbing does it feel to you now?

M: A 3.

T: What makes it a 3?

M: Because luckily the candy ball is out.

T: That is good, isn't it? But what still gives you the tension?

M: That it was a very scary experience.

T: What comes to mind?

M: That I sit down, that I am still scared.

T: And now?

M: Nothing.

T: How uncomfortable is the picture now?

M: A 1.

T: What still causes that last bit of tension?

M: That it is in my throat, that this is scary.

T: What comes to mind?

M: That it is better now.

T: And now?

M: It is not as disturbing anymore when I think back to it.

T: What do you notice?

M: The same now.

T: When you look at the picture, how uncomfortable is it now?

M: Not uncomfortable at all, a 0.

T: Is it a 100% 0? Do you no longer feel any tension and can you just look at the picture now?

M: Yes.

T: That is fantastic. Well done!

Installation and Body Scan

After this, the desired positive cognition—"I can handle it"—is installed. The felt believability is immediately at a maximum level (VoC:7). In the body scan, in which Maggy checks if she still notices tension in her body with this picture, she indicates that she feels tension in her stomach. The tension in her stomach disappears after a couple sets of eye movements.

Future Template

There are no other pictures in the "near-choking film" that still give tension now. The memory of the most recent experience in which fear complaints manifested themselves also has no effect on her. A *future template* is installed, as Maggy has been avoiding eating situations and swallowing as much as possible. In the future picture, she imagines herself sitting at the table, she is eating potatoes, and she swallows the potatoes normally. The practitioner installs the PC "I can handle it." After two sets of eye movements, the VoC is 7.

Video Check

At the practitioner's request, she plays an imaginary film in her head about a future eating situation, from beginning to end. She gets the instruction to stop the film if she still feels any tension. She does this when the potato is in her mouth and gets stuck. The PC "I can handle it" appears entirely credible after two sets of eye movements. Then Maggy forwards the film to the end. In the imaginary film she is eating potatoes, vegetables, and meat in "normal bites" and has Jell-O for dessert.

In Vivo Exposure and Behavioral Experiment

Maggy is now able to experiment. She is asked to try different kinds of foods and to keep track of the pro-

cess in a diary. The tension has gone, but her confidence must grow.

Advice to Parents

Due to the confirmed interaction between parents and Maggy, the following advice is given at the end of this session: Serve her the usual foods, that is, not mashed food or an a la carte menu. Furthermore, do not pay any attention or react to hiccups, swallowing, choking, or vomiting sounds, neither at the table nor when Maggy is having a snack.

Result

During the next session, the parents and Maggy state that things are going much better. She is eating breakfast again in the form of sandwiches, and she is eating what everyone else eats. Maggy has not pureed her food, mashed it, or mixed food with water and other juices. She happily informs the practitioner that she can also eat candy. Now that she spends less energy on eating, she has more energy for fun things such as meeting up with friends. She is also not so tired anymore and goes to school more frequently. When asked how the parents have managed to carry out the difficult and drastic advice, the mother states: "It was quite difficult for a while. In my heart I wanted to watch her, but I was not allowed to, and so I did not do it."

The "near-choking memory" is no longer charged, and the EMDR treatment is concluded by mutual agreement. It is now a matter of building up confidence for Maggy as well as for her parents by once again eating everything and by noticing that eating is going well. There are still a number of interviews with the parents aimed at setting boundaries for upbringing and dealing with Maggy's resistance in going to school. From a telephone interview 3 months onward, it appears that the fear of choking and corresponding complaints have not returned.

Discussion

Considering the limited number of reported cases in literature, it might be concluded that a childhood choking phobia is rare. However, the confusion in terminology and the time lapse between the onset of the disorder and treatment suggest that the diagnosis is often missed. To overcome this problem, the development of operational diagnostic criteria is of primary importance (Bailly & de Chouly de Lenclave, 2005). This will facilitate the recognition of a choking phobia for all disciplines involved. Early diagnosis will prevent the escalation of symptoms and ensure the pro-

vision of adequate treatment. The disorder seems to respond well to short-term treatment.

Due to the disorder's physical consequences, most children with a choking phobia will first present in a medical setting. Because assessment and treatment are often multidisciplinary, with practitioners from medical and psychosocial disciplines, cooperation and communication are essential. As is the case with all complaints with a physical component, adequate medical evaluation is important. The question is: Which type of examination should be performed first: medical examination or psychological/psychiatric examination? If the main hypothesis concerns a medical cause for the complaints, a medical examination obviously has priority. Otherwise, we argue that psychological examination must be performed first even if it is not immediately obvious that there is a time relationship between complaints and a traumatic experience such as a "choking" or "near-choking incident." A short interview can yield a definite answer to whether the memory is actually still disturbing and whether treatment aimed at processing this experience could be useful. In addition to being a limited investment of time, the psychological examination is also less intrusive and less costly than medical examinations and interventions. It appears from the cases, however, that swallowing complaints develop gradually and that children, adolescents, and their parents do not relate these to the choking incident. A further issue is that the underlying experience is not always recognized by bystanders as "traumatizing." This means that the examiner must play an active role to identify possible underlying "disturbing" experiences.

The treatment results (see Table 2) in children from different development phases indicate that EMDR could be effective for choking phobia as long as it concerns a trauma-related choking phobia. In the case series from our practice (Table 2) that concerned children in various developmental stages, the duration between registering and incident varied. The degree of comorbidity, current stress factors, and dysfunction of the parental subsystem varied as well. Nevertheless, a short burst of EMDR treatment yielded positive results in all children. Not only did the complaints related to swallowing and eating decrease, but the secondary consequences of problems such as fatigue and sadness diminished as well. Parents reported that their children had more energy now and that they had started to behave more appropriately for their age. In comparison to the cognitive-behavioral therapeutic and medical treatments mentioned in literature, the effect was reached in fewer sessions. The children were motivated to cooperate despite their prior fear

and resistance to relive the memory. Obviously those who still have complaints after EMDR treatment should undergo further assessment and treatment.

A limitation of the cases described in this article is that no standardized assessment measures were administered. Furthermore, the presented cases may not be representative of the population of children and adolescents with a choking phobia, and four examples are insufficient to draw conclusions about the general efficacy of EMDR for this disorder. Thus we do not know whether, in the case of the elaborate case description of Maggy, the improvement in functioning can be ascribed to the EMDR treatment, to the directive advice to parents to break through the reinforcing interaction, or a combination of these. Once again, this observation underpins the need for more regulated empirical research on the efficacy of EMDR in relation to other methods of treatment for trauma-related specific phobias. The cases described in this article suggest that EMDR in children can help turn traumatic memories into normal memories and the fear of choking into wanting to swallow.

References

- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders (DSM-IV-TR)*. Washington, DC: Author.
- Bailly, D., & de Chouly de Lenclave, M. B. (2005). Choking phobia in children and adolescents: Rarely described but worth studying. In P. Swain (Ed.), *Adolescent eating disorders* (pp. 163–188). New York: Hauppauge.
- Banerjee, S. P., Bhandari, R. P., & Rosenberg, D. R. (2005). Use of low-dose selective serotonin reuptake for severe, refractory choking phobia in childhood. *Journal of Developmental and Behavioural Pediatrics, 26*, 123–127.
- Chorpita, B. F., Vitali, A. E., & Barlow, D. H. (1997). Behavioural treatment of choking phobia in an adolescent: An experiment. *Journal of Behavioural Therapy and Experimental Psychiatry, 28*, 307–315.
- Craske, M. G. (2003). *Origins of phobias and anxiety disorders: Why more women than men?* Oxford: Elsevier.
- Davey, G. C. L. (1997). *Phobias: A handbook of theory, research and treatment*. New York: Wiley.
- de Jongh, A. (2000). Stikangst: Symptomatie, diagnostiek en behandeling. *Nederlands Tijdschrift voor Tandheelkunde, 107*, 8–11.
- de Jongh, A., & Ten Broeke, E. (1998). Treatment of choking phobia by targeting traumatic memories with EMDR: A case study. *Clinical Psychology and Psychotherapy, 40*, 264–269.
- de Jongh, A., & Ten Broeke, E. (1998). De behandeling van stikfobie: Een op de verwerking van de traumatische
- ervaring gerichte benadering. *Tijdschrift voor Psychiatrie, 40*, 623–634.
- de Jongh, A., & Ten Broeke, E. (2006). *Handboek EMDR: Een geprotocolleerde behandelingsmethode voor de gevolgen van psychotrauma*. Amsterdam: Harcourt.
- de Jongh, A., & Ten Broeke, E. (2007). Treatment of specific phobias with EMDR: Conceptualization and strategies for the selection of appropriate memories. *Journal of EMDR Practice and Research, 1*(1), 46–57.
- de Jongh, A., Ten Broeke, E., & Renssen, M. R. (1999). Treatment of specific phobias with eye movement desensitization and reprocessing (EMDR): Protocol, empirical status, and conceptual issues. *Journal of Anxiety Disorders, 13*, 69–85.
- de Jongh, A., van den Oord, H. J. M., & Ten Broeke, E. (2002). Efficacy of eye movement desensitization and reprocessing (EMDR) in the treatment of specific phobias: Four single-case studies on dental phobia. *Journal of Clinical Psychology, 58*, 1489–1503.
- Field, A. P., & Davey, G. C. L. (2001). Conditioning models of childhood anxiety. In W. K. Silverman & P. A. Treffers (Eds.), *Anxiety disorders in children and adolescents: Research, assessment and intervention* (pp. 187–211). Cambridge: Cambridge University Press.
- Himle, J. A., Crystal, D., Curtis, G. C., & Fluent, T. E. (1991). Mode of onset of simple phobia subtypes: Further evidence of heterogeneity. *Psychiatry Research, 36*, 37–43.
- Lovett, J. (1999). *Small wonders: Healing childhood trauma with EMDR*. New York: The Free Press.
- McNally, R. J. (1994). Choking phobia: A review of the literature. *Comprehensive Psychiatry, 35*, 83–89.
- Muris, P., & Merckelbach, H. (2001). The etiology of childhood specific phobia: A multifactorial model. In M. W. Vasey & M. R. Dadds (Eds.), *The developmental psychopathology of anxiety* (pp. 355–385). New York: Oxford University Press.
- Rachman, S. (1977). The conditioning theory of fear-acquisition: A critical examination. *Behaviour Research and Therapy, 15*, 375–387.
- Rachman, S. (1990). The determinants and treatment of simple phobias. *Advances in Behaviour Research and Therapy, 12*, 1–30.
- Schurmans, K. (2007). EMDR treatment of choking phobia. *Journal of EMDR Practice and Research, 1*(2), 118–121.
- Shapiro, F. (2001). *Eye movement desensitization and reprocessing: Basic principles, protocols and procedures*. New York: Guilford Press.
- Silverman, W. K., & Moreno, J. (2005). Specific phobia. *Child and Adolescent Psychiatric Clinics of North America, 14*, 819–843.

Correspondence regarding this article should be directed to Carlijn de Roos, Psychotraumacentre for Children and Youth, GGZ Rivierduinen, Albinusdreef 7, 2333 ZB Leiden, The Netherlands. E-mail: c.deroos@ggzkinderenjeugd.nl