Elective (Selective) Mutism

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17.1 Definition, Classification, and Target Symptoms

Elective or selective mutism (Latin *mūtus*, "speechless," "silent") is categorized by the International Classification of Diseases, 10th revision (ICD-10; World Health Organisation 1996), as one of the "disorders of social functioning with onset specific to childhood and adolescence" (F94). Biological constitution ("inhibited temperament"), model learning, cultural change, and difficulties of language acquisition are regarded as risk factors. A familial disposition is postulated, as selectively mute children and adolescents, in comparison with healthy controls, are significantly more likely to have noticeably introverted relatives who are more insecure, themselves sufferers of selective mutism, or are pathologically anxious (Alyanak et al. 2013; Melfsen and Warnke 2007; Sharkey and Mc Nicholas 2008). The families are generally characterized by higher levels of psychopathological abnormalities (Remschmidt 2001). A controlled study found that the proportion of parents who had at some point in their life suffered a social phobia was higher for children with selective mutism than for a control group, supporting the supposition of a **familial association of mutism and social anxiety** (Chavira et al. 2007). Interacting with this predisposition are factors that reinforce the disease, such as increased attention, being the focus of the family, and avoidance of unpleasant situations. Long-term studies interpret elective mutism as a potential precursor

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of the development of social phobia in adulthood (Sharkey and Mc Nicholas 2008).

The **ICD-10 distinguishes** elective (selective) mutism (F 94.0) from total mutism. **Elective mutism** is characterized by selective speaking with certain persons or in defined situations. The articulation and receptive and expressive speech of the affected person are typically within the normal range; at worst, they are – relative to the development level of the child – mildly impaired. However, literature suggests that many children with selective mutism have premorbid speech and language problems (38 %; Steinhausen and Juzi 1996). Mutistic behavior usually develops in a slow, continuous manner and is most common in socially anxious, sensitive, shy children lacking self-confidence but can also be presented by "unruly" children, who typically talk in environments where they feel comfortable, but not in childcare, in school, or in unfamiliar situations (Alyanak et al. 2013; Krysanski 2003). Diagnosis according to ICD-10 requires a certain consistency of presentation and symptomatic persistence, as well as a minimum duration of the symptoms of 1 month. In **total mutism**, the child does not speak at all, although the capacity for speech is fundamentally intact.

In the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (**DSM-5**), "selective mutism" (312.23) is classified as a **subtype** of an **anxiety disorder** (American Psychiatric Association 2013). There is no distinction between selective and total mutism. The duration of the mutism should be at least 1 month and should interfere with educational or occupational achievement or with social communication.

In the differential diagnosis, elective mutism must be distinguished from developmental disorders of language and speech acquisition, inadequate speech comprehension (e.g., migration background), speech loss syndromes related to organic brain disorders (head trauma, aphasia), audimutitas and schizophrenic psychoses, as well as deafness or restricted hearing capacity.

Target symptoms of pharmacological therapy are the anxiety and emotional disorders that may accompany mutism (overview of therapy: Melfsen and Warnke 2007; Wong 2010).

17.2 Therapeutic Framework

As the disorder tends to chronification, **early treatment** is **essential**. An **individualized, multidimensional intervention** is generally recommended for elective mutism, including cognitive-behavioral therapeutic, family therapeutic, psychosocial, and psychopharmacological elements (Cohan et al. 2006; Sharkey and Mc Nicholas 2008). A detailed explanation of the disorder and counseling of the parents and carers or teachers of the child or adolescent are important preconditions for effective implementation of treatment measures.

The **goal** of therapy is to lead the children to **verbal communication**, not just in the therapeutic situation, but also in everyday situations that cause the child anxiety (Melfsen and Warnke 2007). The principle underlying **behavioral therapy** is the facilitation of conversation with adults and therapists in order to gradually construct a generalization (contingence management). This can commence with encouragement of nonverbal communication behavior; in the next stage, linguistic behavior is systematically promoted and rewarded, while mimic-gestural compensations are broken down. Model learning and exposure therapy techniques are also employed to actively increase the opportunities for speech. Cognitive-behavioral therapeutic elements contribute to relieving the child of their anxiety regarding speaking and to supporting positive reinforcement of all spoken communication. A combination of individual and group therapy (to promote social competences and different communicative capabilities, including nonverbal) is advisable, as is family counseling.

The **family therapy approach** serves the conditions and factors identified that may have triggered or maintained the disorder but also specifically exploits the skills of the family for co-therapy. In psychosocial interventions, the relevant social group (such as the preschool or school) as well as leisure activities are incor-

porated into the overall treatment plan (e.g., Oerbeck et al. 2012). The patient is encouraged through creative individual and group activities (such as sport) to develop normal communicative behavior (Melfsen and Warnke 2007).

17.3 Choice of Pharmacotherapy

In addition to the non-medication-based treatment approaches, pharmacological therapy with **antidepressants** (fluoxetine or imipramine in particular) or **antianxiety medications** as "off-label use" is indicated, if psychotherapeutic interventions alone have not been sufficiently successful, especially in anxious-depressive forms of mutism (Kaakeh and Stumpf 2008; Wong 2010). Studies with small case numbers and short observation periods as well as individual case reports indicate that some patients with elective mutism respond to therapy with other selective serotonin reuptake inhibitors (**SSRIs**), including fluvoxamine and sertraline (Carlson et al. 1999). In a double-blind placebo-controlled study in which 16 subjects with elective mutism were enrolled, significant improvements over time on ratings of elective mutism, anxiety, and social anxiety, rated by clinician, parents, and teachers were demonstrated in both fluoxetine- and placebo-treated subjects (Black and Uhde 1994). Subjects treated with fluoxetine were significantly more improved than placebo-treated subjects on parent's ratings of mutism change and global change. However, clinician and teacher ratings did not reveal significant differences between treatment groups. Although improved, most subjects in both treatment groups remained very symptomatic at the end of the study period. The average maximum daily dosage in this study was 0.6 mg/kg fluoxetine and in an open-label study 28 mg/day (Dummit et al. 1996).

Second-line treatment may involve monoamine oxidase (MAO) inhibitors, type A (Kumpulainen 2002; Wong 2010). Golwyn and Sevlie (1999) showed that phenelzine, an irreversible nonselective MAO inhibitor (see Sect. 1.4.1), was helpful in four prepubertal children and also in one case after fluoxetine had shown only minimal improvement after 10 months. However, because of the possibility of serious food and drug interactions, selective MAO-A inhibitors such a moclobemide should be reserved for cases only that do not respond to behavior therapy and fluoxetine or other SSRIs.

Information regarding fluoxetine and imipramine (recommended dosages, adverse drug reactions, medication interactions, contraindications, and special precautions) is found in Chap. 4. Experience with other antidepressants is limited and cannot be generalized. Short-term application of benzodiazepines to reduce anxiety can be useful in clinical practice in individual cases.

17.4 Treatment Strategies

To date, studies about the long-term outcomes for the different treatments of selective mutism are lacking. One small nonrandomized pilot study showed improvement under medication treatment with SSRIs in 6–8 months, which was limited to the severely mute population and was not attained by patients who were not medicated (e.g., only received non-medication-based therapies or who received no therapy at all; Manassis and Tannock 2008). The practical conclusion is that treatment should consist primarily of cognitive-behavioral therapeutic interventions.

Pharmacotherapy of mutism remains difficult, is **reserved for chronic forms**, and is especially indicated in patients with **comorbid depression** and any other **anxiety disorder** (most commonly social anxiety disorder, separation anxiety, and specific phobias). The same guidelines apply to the employment of fluoxetine and imipramine as for their use in the treatment of anxiety (Chap. 11) and depressive disorders (Chap. 14). The long-term results of clinical response are mostly good, but symptomatic improvement is frequently associated with a symptomatic transformation (social phobia, anxiety disorders, conduct disorders).

It must be remarked with respect to all the above-described therapeutic strategies as qualification that the scientific evaluation of their effectiveness is still largely based upon reports and opinions of expert panels, consensus conferences, and clinical experience (level of evidence V).

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