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LETTER TO THE EDITOR

Monozygotic twins diagnosed with selective mutism

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Dear Editor,

Selective Mutism (SM) is a disorder that typically manifests in early childhood and is characterized by the inability to speak in certain social situations where verbal communication is required. Its prevalence varies between 0.03% and 1% (1). Among the etiological factors, the literature refers to various influences such as genetic factors like CNTNAP2 gene polymorphism, overprotective and controlling parenting styles, immigrant status, and impairments in language development. Studies of children diagnosed with SM have observed behavioral patterns such as inhibited temperament and excessive avoidance, which are also considered potentially learned within the family context (2). Compared to other psychiatric disorders in childhood and adolescence, selective mutism is underdiagnosed and remains insufficiently studied. As a result, uncertainties surrounding its etiology and difficulties regarding its treatment persist. Although various heterogeneous factors, primarily "anxiety," particularly social anxiety (3), have been implicated in the etiology of SM, further studies are necessary to identify the underlying causes and to develop effective treatments.

The 7-year-old monozygotic twin sisters were brought to our polyclinic by their mother, who requested an evaluation for the children due to difficulties with "talking to strangers." This was their first visit. Prior to starting school, the twins spent most of their time at home, primarily playing with each other. They did not exhibit any social communication issues with family members at home. However, they had minimal interaction with individuals outside of their immediate family. When they began first grade, they were unable to attend school due to the Coronavirus Disease 2019 (COVID-19) pandemic, and their education continued online. Consequently, their teacher was unable to assess their progress. Upon transitioning to second grade, their teacher noticed that the twins showed signs of delayed literacy development compared to their peers, did not speak in the classroom, used minimal gestures for communication, and did not participate in any social interactions. The delay was evident in their homework as well. Following the family interview, it was understood that the twins had difficulty adapting to online classes during their first year of primary school. The twins' "shyness" condition persisted for six months.

During the psychiatric examination, the children showed no effective communication. They did not respond to questions posed to them but maintained eye contact. However, they did not use gestures or facial expressions. Their psychomotor activity was normal, and no stereotypy was observed. Their affect was inhibited and anxious. Their mental capacity assessment was suboptimal because of difficulties with talking but was roughly appropriate for their age group. Subsequently, the Wechsler Intelligence Scale for Children (WISC) was administered to assess the twins' cognitive abilities. Their WISC results could not be evaluated, as they refused to speak during the

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exam. Since it was not possible to administer cognitive tests to the twins, the Goodenough-Harris Draw-A-Person Test was conducted. The twins demonstrated normal performance for their age group. Therefore, intellectual disability was not considered to be a primary concern in these children.

The twins were born via cesarean section at the 30th gestational week, and both required a one-month stay in the neonatal intensive care unit because of respiratory distress. Their developmental milestones were reported as normal. The twins began walking at 14 months, produced their first words at 15 months, and started constructing sentences at 24 months. Their primary caregiver during childhood was their mother. No stressful life events were identified in the past. Medical examinations revealed no pathologies, and they had no additional medical conditions. There was no psychiatric diagnosis in the family history, though the mother's timid behavior was notably evident during the examination. When the mother was asked to elaborate on her own history, she described lifelong difficulty with speaking in public and feeling shy, but she had never sought psychiatric care. The mother described herself as a "self-sacrificing mother." She only thought of her daughters' well-being and hurried to meet their every need. In contrast, the father's attitude toward the twins was described as cold and distant. He came home late from work, had minimal interaction with his daughters and wife, and when he did interact, it was generally to "punish" the twins for their bad actions.

As a treatment option, although cognitive behavioral therapy (CBT)-based play therapy was initially recommended due to the twins' limited verbal communication, psychotherapy could not be initiated because of the family's economic and social disadvantages. Instead, pharmacological treatment with fluoxetine was commenced, and the dose was gradually increased up to 30 mg/day. To evaluate the effectiveness of the treatment, the Clinical Global Impression (CGI) scale was used, and the severity score prior to treatment was assessed as CGI-S: 6. At the first follow-up visit one month later, assessment revealed that difficulties in verbal communication in settings outside the home persisted, classroom participation remained limited, and the CGI-S score was still 6. Therefore, the fluoxetine dose was increased to 20 mg/day. At the second follow-up, partial improvement was observed; the twins had begun to initiate communication with peers, although difficulties in interacting with adults remained. The assessments were CGI-S: 4 and CGI-I: 3. In response, the fluoxetine dose was increased to 30 mg/day. However, no marked improvement was observed (CGI-S: 4, CGI-I: 3). No medication-related side effects were reported during the course of treatment.

Both genetic and environmental factors are implicated in the etiology of selective mutism. The clustering of SM and other anxiety disorders within families of individuals diagnosed with SM, along with the absence of SM in all individuals sharing the same environment, underscores the significance of genetic influences. In the presented case, the fact that both monozygotic twins—who share an identical genetic pool—were diagnosed with SM, along with the presence of anxiety traits in the mother, further supports the genetic theory. However, the role of environmental factors must not be overlooked.

Various theoretical models have been proposed to explain the etiology of SM, including psychodynamic models, behavioral models, and family systems theories. According to the behavioral model, the refusal to speak seen in SM is interpreted as a learned strategy employed to manipulate the environment in response to specific social triggers. As a result of this learning, behavioral inhibition and a freeze response associated with sympathetic nervous system activation may be observed (4). In the present case, the father's distant and punitive demeanor toward the children may have led to the development of mutism as a defensive mechanism aimed at avoiding punishment. However, the absence of mutism at home and the lack of avoidance behaviors weaken the applicability of this explanation in the current case.

According to the family systems model, another explanatory framework, the development and persistence of the disorder are influenced by an overly enmeshed and "neurotic" relationship—typically between the child and the mother. In this model, parents often display an excessive need to control their children, coupled with dependency and ambivalence. Consequently, children may develop intense, unhealthy attachments characterized by over-dependence, fear and distrust of the external world, fear of strangers, language and assimilation difficulties, and refusal to speak (4). In this case, the mother's anxious temperament, her sense of duty to instantly meet her children's needs, and her possible self-image as a "self-sacrificing mother"—which may provide secondary gain—support the relevance of this model. Furthermore, the close and undifferentiated relationship between the twins, their dependence on each other for social interaction, and their isolation from the outside world—which increased during the COVID-19 pandemic—may have played a role in the

development and continuation of their symptoms within the framework of this model.

A recent study suggests that positive (i.e., authoritative) parenting may be associated with a reduced risk for SM in children with high levels of anxiety and oppositionality. However, negative parenting was associated with SM only in children who exhibited fewer externalizing and internalizing behaviors (5). This finding further supports the family systems model.

Due to the strong genetic similarity of monozygotic twins, combined with environmental factors, it is possible for this disorder to manifest in both siblings. However, further research is needed to clarify the exact etiology.

Selective mutism is a rare psychiatric disorder that typically manifests in early childhood. Due to its early onset, pharmacological treatment is often avoided. Consequently, a treatment algorithm supported by robust evidence has yet to be established. A systematic review aimed to evaluate the existing studies up to that date but highlighted the limited number of available studies as a major constraint. The same review compared CBT, pharmacological treatment, and combination therapies, concluding that CBT was more effective than psychopharmacological agents. However, it was noted that the predominance of younger patients in the sample might have led to pharmacological agents being reserved for more severe cases, potentially biasing the results. Among psychopharmacological agents, fluoxetine was the most frequently used and was shown to be well tolerated (6). In a 12-week randomized controlled trial comparing fluoxetine (mean maximum dose of 21.4 mg) with placebo in 15 children, both groups showed improvement in selective mutism symptoms over the course of the study. The treatment group exhibited relatively greater improvement based on parent ratings, although no significant differences were observed in clinician or teacher ratings (7).

Treating monozygotic twins diagnosed with SM may present unique challenges due to their close social bond. Monozygotic twins inherently struggle with separating from one another and establishing individual identities. This challenge is often exacerbated by the inability of parents and society to distinguish between them as separate individuals. Studies suggest that the inability of twins to develop individual identities may lead to developmental delays, with mutual mirroring contributing to their isolation as a unit, which in turn hinders their language and intellectual development (8).

In the treatment of the twin cases we presented, it may be beneficial to increase stimulation by providing individualized time with the children and their family. Additionally, exposing the twins to environments where they can interact with their peers and socialize with strangers may be advantageous. It is also crucial to assess and treat the mother or father for any active psychopathology (e.g., the possibility of social anxiety disorder in the mother). This approach will not only improve mother-child communication but also help the mother recognize and adopt a more positive social role model. Lastly, continued psychotherapeutic and psychopharmacological treatment for the twins could potentially contribute to a faster recovery.

In this case, only the CGI scale was used for patient follow-up. The limited availability of validated assessment tools specific to SM in Turkish clinical practice represents a significant limitation in diagnosis and monitoring.

This case illustrates how shared genetics, enmeshed sibling relationships, and parental psychopathology may contribute to selective mutism. Further research is needed to refine treatment strategies for such complex presentations.

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