The Role of Modified Shaker Exercises in Dysphagia and Nasogastric Feeding in an Individual with Triple X Syndrome: A Case Study

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Abstract:

Introduction: Triple X syndrome is the most prevalent chromosomal abnormality affecting females, characterized by features such as tall stature, microcephaly, hypertelorism, congenital anomalies, and delays in motor and language development.1 Remarkably, due to the patients' completely typical appearance at birth, only approximately 10% of these cases are clinically recognized.1 While distinct phenotypic characteristics are not evident in the neonatal period, congenital anomalies, particularly those involving the urogenital system, are noteworthy.This case study examines an individual with Triple X syndrome who developed swallowing difficulties, necessitating the use of a nasogastric tube and percutaneous endoscopic gastrostomy for feeding. However, the implementation of swallowing therapy enabled the individual to transition to oral feeding. The function and significance of swallowing therapy in an individual diagnosed with Triple X syndrome is emphasized.

Case Study: At the age of three, the female patient required a nasogastric tube for nutritional support due to an inability to swallow, which manifested at one year of age. Based on the patient's medical history, a diagnosis of Triple X syndrome was established at 3 months of age, with no reported consanguinity between the parents and an uneventful first pregnancy for the mother, resulting in a 3200g cesarean delivery. Swallowing difficulties emerged at 5 months, accompanied by frequent upper respiratory infections, postural instability, speech, swallowing, and voice problems, as well as developmental delays. The patient has relied on nasogastric tube feeding for the past 3 years. Evaluation revealed weaknesses in swallowing, chewing, and feeding, with radiographic evidence of silent aspiration, difficulty swallowing water with associated coughing and facial flushing. Additionally, limited tongue rotation, buccal weakness, normal palatal structure, impaired chewing function, reduced gag reflex, and diminished voice intensity were observed.

Conclusion: The patient underwent a systematic two-session-per-week swallowing and feeding therapy regimen lasting 12 weeks. Dysphagia and feeding difficulties, coupled with weak chewing postures, represent a significant challenge for individuals with Triple X syndrome. This adversely