

IDIOPATHIC TOE WALKING IN CHILDREN - GUIDED SELF-REHABILITATION AS A NEW THERAPEUTIC APPROACH, CASE STUDY

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Background

Toe walking is a suboptimal locomotion pattern in which children walk on the tiptoes without the hindfoot touching the floor. The majority of causes remains idiopathic (habitual) toe walking (ITW). Several causes of ITW have been suggested, such as delayed development of the cortico-spinal tract, vestibular dysfunction, psychogenic causes or congenital shortening of the Achilles tendon. In some children, functional disruption or general deconditioning may develop. Treatment is usually based on age, underlying cause, the development and severity of tendon contracture. There is good evidence for casting and surgery in the treatment of idiopathic toe walking, but also the intramuscular injection of botulotoxin into calf muscles in combination with an exercise program can improve the walking pattern.

Case report

8 years old boy, who suffered from IWT, was sent to our department by an orthopedist for consultation. In case history, there was neurologically suspicion of Asperger's syndrome. ITW occurred when the patient was 2 years old. He underwent repeated sessions of guided physiotherapy, including Vojta reflex locomotion and Bobath concept, as well as orthotic management (splinting and shoe insoles), all with minimal therapeutic effect. Patient was examined according to professor Gracies' concept. Range of motion (ROM) was restricted bilaterally. No signs of spasticity were observed. The patient was unwilling to undergo injection treatment, so we chose kinesiotherapy. He and his mother were briefed in self-rehabilitation based on a combination of stretching the triceps surae muscle and strengthening the antagonistic muscle groups. The follow-up examination after four weeks showed significant improvement in both active and passive ROM, with complete elimination of toe walking.

Conclusion

Guided self-rehabilitation based on the concept of prof. Gracies, commonly used in patients with focal spastic paresis, can be effectively used in therapy of IWT. Parenteral and child compliance is crucial and it is a key factor in treatment effectiveness.

Keywords: toe walking, children, self-rehabilitation