The Application of Osteopathic Manipulative Medicine (OMT) in Duane’s Retraction Syndrome (DRS) and Idiopathic Toe Walking (ITW): A Case Study

Kristen de Vries, OMS III, Patricia Kooymen, DO, Andrea Thau, O.D.*, Sheldon C. Yao, DO

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Department of Osteopathic Manipulative Medicine, NYIT-College of Osteopathic Medicine, Old Westbury, New York (de Vries, Kooymen, Yao); and State University of New York College of Optometry, New York, New York (Thau)

Abstract

A 6-year-old female with a past medical history of Duane’s Retraction Syndrome (DRS) and toe walking presented to the NYIT healthcare center for osteopathic manipulative treatment (OMT). DRS is a congenital disorder causing impaired ocular movement due to a miswiring of the ocular muscles. Surgery and prism glasses are the available treatment options. For her diagnosis of DRS, the patient and her family consulted with three optometrists, each of whom stated there was no treatment available. Her current optometrist prescribed prism glasses, which provided some improvement in both ocular movement and toe walking. Idiopathic toe walking (ITW) is an inability to make heel contact with the floor with standing and during the gait cycle. The pathophysiology is unknown; however, it has been suggested that ITW is associated with sensory perception deficits. Toe walking persisting beyond two years of age may require investigation. Non-operative treatment includes stretching, casting, and orthotics. Physical therapy provided temporary improvement in the patient’s gait. Her current optometrist suggested a consultation with an osteopathic physician specializing in OMT. Osteopathic structural examination revealed significant somatic dysfunctions in the cranial and cervical regions, as well as the lower extremities. These findings were addressed with OMT, and immediate improvement, without the use of prism glasses, was noted both with the ocular symptoms and gait. The clinical correlations highlighted in this case provide support for the potential role of OMT for both DRS and ITW, conditions where treatment options are limited.