E-Poster

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Impact of Lower Limb Inequality on Spinal Deformities in Children: Role of Physical Medicine and Functional Rehabilitation Management: A Case Report

Topic: Health Conditions (Nervous System, Musculoskeletal System, Cardiopulmonary System)

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BACKGROUND

The inequality of the lower limbs in children is often benign, but can lead to important postural imbalances when significant, which can lead to spinal deformities and may affect the functional prognosis in children. Early management in physical medicine plays a crucial role in correcting of these postural imbalances.

CASE DESCRIPTION

This is a 10-year-old girl with no significant past medical history, who is being followed in our department for a lower limb length discrepancy. During the clinical examination, she was observed to have a limping gait, a 3 cm discrepancy between her lower limbs (with the right lower limb being longer than the left), a right foot deformity characterized by hallux valgus, and bilateral flat feet. The spinal examination revealed a thoracolumbar scoliotic posture associated with contracture of the paravertebral muscles.

The paraclinical workup included a full-length lower limb radiograph (pangonogram) which confirmed the discrepancy in limb lengths, as well as a full-spine radiograph that demonstrated a thoracolumbar scoliosis with a Cobb angle of 30°.

Management in Physical Medicine and Rehabilitation consisted of motor re-education program, orthotic intervention using orthopedic shoes to correct the discrepancy and flat feet, and the application of a CTM brace for correction. This approach resulted in a notable improvement in the patient's clinical condition.

DISCUSSION

Lower limb inequality is a common issue in children, often benigne and of idiopathic origin. However, when the difference in limb length becomes significant, musculoskeletal complications can arise, including postural deformities such as spinal compensation. Children may develop imbalances in the hips, knees, or even spinal deformities.

Physical medicine plays a key role in managing these patients, especially in cases where the inequality is considerable. An therapeutic approach that includes physiotherapy interventions and the use of orthopedic devices can help reduce or prevent negative effects. Early intervention often prevents the progression of deformities and limits the long-term functional impact.

CONCLUSION

Physical Medicine and Functional Rehabilitation play a crucial role in managing lower limb inequality and its associated spinal deformities, particularly scoliosis. Through an early comprehensive approach, including postural assessments, physiotherapy, and Orthotic devices. This approach have shown significant effectiveness in restoring postural alignment and preventing further complications.

Statement of Disclosures

None

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