Nowadays, computerized gait analysis in clinical practice is becoming increasingly popular and is turning out to be an integral part of the treatment decision-making process of patients with gait disorders such as cerebral palsy, neuromuscular diseases, musculoskeletal and neurological diseases. Three-dimensional computerized gait analysis allows a more objective evaluation in the diagnosis and treatment of the diseases with gait abnormalities. In addition to providing us information about the movement abnormalities on different planes, gait analysis also presents us with graphical depiction of the movement. Computerized gait analysis includes time and distance parameters, kinematics, kinetics and dynamic EMG graphs. The joint kinematics graphs provide objective assessment of the patient’s ambulatory patterns, and allow differentiation between the primary pathologies and compensatory mechanisms which develop secondary to these primary pathologies. The joint kinetics graphs provide information about the mechanisms that produce movement. With the three-dimensional computerized gait analysis, treatment algorithms can be identified, and effectiveness of the treatment can be evaluated. It should be kept in mind that the diagnosis of diseases with gait abnormalities can not be made only by gait analysis, detailed physical examination and necessary diagnostic tests should be done and gait analysis with all these data should be reviewed.

In this presentation, we will discuss how we use computerized gait analysis in the diagnosis and treatment of patients with gait abnormalities in clinical practice.