



# Psychogenic Gait: When It Is and When It Isn't

## Correlating the Physical Exam with Dynamic Gait Data

Kimberly Wesdock, PT, MS, PCS, Susan Blair, MS, PT, George Masiello, BSEET, Jay Nogi, MD

Children's Hospital  Richmond, Virginia

### Introduction

Psychogenic gait problems are difficult to identify with certainty. Some clinicians are hesitant to refer patients for psychological evaluation. Even when patients with a suspected psychogenic component of illness are referred for psychological services, many individuals refuse to go. If these same individuals are referred for computerized gait analysis (CGA), this is acceptable because of the physical nature of CGA. Thus, can CGA assist in decision-making for this challenging group of patients?

### Methods

Four physicians referred four patients, *all suspect for psychogenic gait*, for comprehensive gait analyses which included:

- Standardized history intake
- Gillette Functional Assessment Questionnaire (G-FAQ)
- Physical examination by same physical therapist
- Split-view videography of testing and functional activities of single limb balancing, tandem walking on a line, toe and heel walking, hopping and running
- Lower extremity kinematics
- Multi-segmented foot kinematics
- Kinetics
- Surface EMGs

	Case #1	Case #2	Case #3	Case #4
<b>Age/Gender</b>	17 yo female	36 yo female	9 yo female	54 yo male
<b>Diagnosis</b>	Chronic RSD	RSD L Knee	Undiagnosed Gait Disorder	Foot Pain w/ ↑ Pronation
<b>History</b>	<ul style="list-style-type: none"> <li>• Identical twin w/ JRA</li> <li>• Mother brought extensive hx</li> </ul>	<ul style="list-style-type: none"> <li>• Prior knee surgery</li> <li>• 2 hours daily aerobics</li> </ul>	<ul style="list-style-type: none"> <li>• Precocious puberty</li> <li>• Normal until 1 year prior</li> </ul>	<ul style="list-style-type: none"> <li>• Anxiety disorder</li> <li>• Work modifications</li> </ul>
<b>Physical</b>	<ul style="list-style-type: none"> <li>• Normal</li> <li>• + la belle difference</li> <li>• - RSD symptoms</li> </ul>	<ul style="list-style-type: none"> <li>• - Neuro sx</li> <li>• - RSD sx</li> <li>• Abnormal sensory complaints</li> </ul>	<ul style="list-style-type: none"> <li>• + Babinski</li> <li>• + Clonus</li> <li>• Abnormal physical findings</li> </ul>	<ul style="list-style-type: none"> <li>• Pain, ↓ ROM</li> <li>• Stiffness in spine, knees, feet, toes</li> <li>• Skin changes</li> </ul>
<b>G-FAQ</b>	Level 5 ambulator	<ul style="list-style-type: none"> <li>• Level 3 w/o knee sleeve</li> <li>• Level 8 w/ knee sleeve</li> </ul>	Level 10 ambulator	Level 10 ambulator
<b>Dynamic Gait Data</b>	<ul style="list-style-type: none"> <li>• Slow velocity</li> <li>• Exaggerated movements</li> </ul>	<ul style="list-style-type: none"> <li>• Exaggerated slowness w/ inconsistencies</li> </ul>	Kinematics and kinetics consistent w/ spasticity	Kinematics consistent w/ contractures and pain
<b>Foot Kinematics</b>	Unremarkable	Unremarkable	Pronatory collapse consistent w/ spastic disorder	No abnormal pronation; actually mild cavus foot
<b>EMG</b>	Unremarkable	Unremarkable	Excessive activity consistent w/ spasticity	Prolonged firing of left foot evertors
<b>"Diagnosis" After CGA w/ Physical</b>	Psychogenic gait ?Munchausen by proxy	Psychogenic gait ?Conversion disorder	Spastic paraparesis - Etiology unknown	Spondylo-arthropathy ?Reactive arthritis/Reiter's syndrome (late inactive stage)

### Discussion

The 1<sup>st</sup> and 2<sup>nd</sup> cases carried the diagnosis of reflex sympathetic dystrophy (RSD), however because of discrepancies between the physical exam and dynamic gait data, the diagnosis of a psychogenic gait disorder was supported. Consequently, the question arises...How often is the diagnosis of RSD (or complex regional pain syndrome) actually a conversion or other psychogenic disorder?

In the 3<sup>rd</sup> and 4<sup>th</sup> cases, despite the question of a psychogenic component (with or without accompanying physical impairments), discrete physical findings were documented which correlated with the dynamic gait data. Thus, a psychogenic gait disorder was not supported in these two cases.

For this patient type, a complete medical evaluation is essential in order to rule out organic etiology when a psychogenic gait is suspected. However, once this evaluation has been completed and medically unexplained impairments continue to persist, the treating physician must rely on objective evidence to determine the next course of action.

### Conclusion

This series of case reports illustrates the potential usefulness of computerized gait analysis when it includes a detailed standardized physical examination, along with dynamic gait components. These objective findings provided helpful evidence to the referring physicians and assisted with clinical decision-making.