Boston PainCare Center

DAVID DIBENEDETTO, M.D.
FERNANDO BAZOBERRY, M.D.
DOUGLAS KEENE, M.D.
LEE SILK, M.D.
RAKESH DHAR, M.D.
JAMES O'BRIEN, M.D.
DONALD COUNIHAN, D.C.
JACKIE ORENT-NATHAN, FNP BC
MARY JANE ESTRADA-LYDER, ARPN BC
OLUWATOKE MAYAKI RN, NP-C
LARA HARRIS-DAVID, LICSW
EDWARD MCCARTHY, LICSW
AMY BENOIT, P.T.
DEBORAH MURRAY, P.T.A.

We don't treat pain, we treat people with pain…

Interdisciplinary Assessment Report

Name: Mr. Patient

Consultation Date: 11/16/2009

Date of Birth: 03/24/1966

Referring Physician:
Mark Smith, MD
110 East Street, # 401
Brighton, MA 02135

Assessment Summary:

Differential Dx	Planned Initial Diagnostic Assessments & Tests	Planned Initial Therapies
• Post Laminectomy Syndrome • Lumbar Discogenic Pain • Lumbar Spinal Stenosis • Lumbar Zygapophyseal Joint Arthropathy • Myofascial Pain Syndrome	• CT - lumbar spine • Physiatry Evaluation • Dx Z-Joint Denervation (possible) • Spinal Cord Stimulator Trial (possible)	• Functional Rehabilitation • Lumbar ESI Series (possible) • Behavioral Therapy • Medication Management

Assessment Report:

Introduction

Mr. Patient is a 43-year-old gentleman with a past medical history significant for hypertension and NIDDM. He presents today for evaluation of lower back and bilateral lower extremity pain persistent after multiple spinal surgeries.

The patient first began to note symptoms of lower back pain after sustaining an injury in 2000. The patient describes being crushed between two cars. He noted an immediate onset of lower back pain, which he describes as severe. This led to the patient undergoing lumbar diskectomy of L5-S1 in January of 2001. In the immediate postoperative period, the patient began to develop symptoms of pain traveling down the lateral aspect of both legs. This led to him having a fusion procedure performed in 2001. After the surgery, the patient noted some improvement in his lower back pain but continued to have significant pain in the lateral aspects of both lower extremities.

The patient describes his current symptoms as a constant aching/burning sensation occurring in the central lower back with extension into the buttocks bilaterally. He also describes a constant sharp stabbing sensation traveling down the lateral aspect of both lower extremities, stopping at his ankles. He describes episodes of paresthesias in the same distribution as his pain as well as on the soles of his feet. He denies any true numbness, but has noted mild weakness of both lower extremities. He denies any changes in bowel or bladder function. Aggravating factors include: coughing or sneezing, Valsalva, sitting or

driving and standing or walking for prolonged periods. He scores his usual pain as a 7 out of 10 on the VAS. He feels that the pain causes severe functional impairment, interfering with most activities of daily living. The pain can also interfere with sleep.

Previous treatment has included postoperative epidurals performed within the first two years after his surgeries. He achieved some transient relief with these injections. The patient cannot recall undergoing any other interventional procedures. The patient also underwent physical therapy at that time, which provided little relief.

The patient's current pain medication regimen includes OxyContin 240 mg BID, oxycodone 30 mg q.4 hours p.r.n. and Lyrica 200 mg p.o. daily. The patient describes fair to good pain relief with these medications. He denies any significant side effects from the medications. He says he that he has been maintained on this dose of medication for a number of years.

Based upon the history obtained today and the physical exam performed today, as well as our initial assessments and review of available diagnostic data, I believe the possible etiology of this patient's pain to include:

1. **Post Laminectomy Syndrome** - This diagnosis refers to chronic back and/or leg pain that occurs after spinal surgery. Multiple factors can contribute to the onset or development of this disorder. Contributing factors include, but are not limited to, residual or recurrent disc herniation, persistent post-operative pressure on a spinal nerve, altered joint mobility, joint hypermobility with instability, scar tissue (fibrosis), depression, anxiety, sleeplessness and spinal muscular deconditioning. Common symptoms associated with this disorder include diffuse, dull and aching pain involving the back and/or legs. Abnormal sensibility may include sharp, pricking, and stabbing pain in the extremities (as is seen in this patient).
2. **Lumbar Discogenic Pain** - The pain that this patient is experiencing may be secondary to underlying discogenic disease. Patients with such pathology typically experience axial lumbar pain with occasional radiation to the buttock and thigh region. They also will often experience a worsening of pain upon lumbar flexion as well as with the performance of a Valsalva maneuver (as occurs with such activities as sneezing and defecation) as is seen in this patient. Furthermore, the most recent imaging study in this patient shows evidence of underlying lumbar degenerative disk disease.
3. **Spinal Stenosis** - The pain that this patient is experiencing may be secondary to underlying spinal stenosis. Lumbar stenosis (spinal stenosis) is a condition whereby either the spinal canal (central stenosis) or vertebral foramen (foraminal stenosis) becomes narrowed. Low back pain and lower extremity pain, numbness and tingling results when the narrowing becomes substantial. Initially, the pain is often relieved with sitting and leaning forward with ambulation (which results in a reduction in the nerve compression), and worsened with lumbar extension and ambulation while standing upright (resulting in neurogenic claudication), as is seen in this patient.
4. **Lumbar Zygapophyseal Joint Arthropathy** - This patient's symptoms may be secondary to underlying zygapophyseal joint arthritis (lumbar spondylosis). Patients with such pathology will typically experience referred pain in the lumbar flanks, buttocks and thighs (as is seen in this patient).

5. **Myofascial Pain** - This syndrome presents with moderate to severe muscle pain that is associated with complaints of early morning stiffness, fatigue, decreased ROM, weakness and increased sensitivity to cold. Patients also present with tender nodules and taut muscle bands as well as distinct trigger point areas. When these trigger point areas are active they produce both local as well as referred pain upon palpation. While the exact etiology of this syndrome is unclear, it appears that sudden overloading or stretching of the muscle is a precipitating factor.

As such, the following recommendations have been made to this patient:

Diagnostic Studies

This patient is in need of a **CT Scan** of the lumbar spine to determine if lumbar pathology, such as nerve root compression, degenerative disc disease or facet osteoarthritis is responsible for his pain symptoms. We will review with this patient his CT scan findings, as well as options for therapy based in part upon the results of this study.

Interventional Therapies

Depending on the findings of the patient's CT, we likely will proceed with a trial of epidural steroid injections using a transforaminal approach to treat this patient's pain secondary to his lumbar herniated disc. If the patient's symptoms respond to this treatment, a total of 2-4 injections may be needed over the next several weeks to optimize the benefits from this procedure. We may also consider pursuing diagnostic lumbar zygapophyseal joint denervation as well.

I also had a brief discussion with the patient regarding the use spinal cord stimulator therapy in the treatment of chronic neuropathic pain, especially in patients who have had previous spinal surgery. The patient was provided with an educational DVD, and we will discuss this further at a later visit.

Medication Therapies

The following medication recommendations have been made to this patient today:

Opioid Medication Therapy - This patient's chronic pain is currently being treated with opioid medications, and the patient requests consideration for medication management at Boston PainCare Center. As such we will initiate the medication management enrollment protocol. The patient submitted the first urine sample today for drug testing as per BPC policy. The patient will return to review the results of the drug test as well as to review and sign BPC's medication management agreement. At the time of this visit a comprehensive behavioral assessment will be administered. The purpose of this assessment is: to help determine whether a substance abuse disorder exists, to assess the risk factors present that could lead to future substance abuse issues, and to determine the necessary behavioral therapy plan of care. Should we determine that a substance abuse disorder may be present, we will then recommend referral of the patient to an addictions specialist for consultation and possible treatment. If, after this initial assessment, the patient is considered a reasonable candidate for opioid medication management at BPC, we will then assume management of the patient's opioid medications. **This process takes a minimum of three weeks to complete, and the patient is aware that at least a one month supply of medication is needed from his current provider.** It was additionally made clear to the patient that the overall goals of the program include: finding effective nonopioid therapies for the treatment of his chronic pain condition, avoiding opioid dose escalation, and working towards reducing the total dose of opioid medication taken when possible.

Behavioral Assessment

Based upon the results of the behavioral testing performed today (please see the Behavioral Assessment section for details); I believe this patient would greatly benefit from behavioral therapy. This patient will receive monthly behavioral therapy as part of the medication management program at Boston PainCare Center. Specifically, we will focus on the use of therapeutic modalities such as cognitive behavioral therapy to help increase and restore to the greatest extent possible this patient's functional capacity.

Functional Rehabilitation Assessment

The results of physical performance testing conducted today reveal the patient to have significant physical deficits (See Physical Performance Assessment section below for details). As such, I believe this patient would greatly benefit from a course of functional rehabilitation at Boston PainCare Center. I have therefore referred this patient to our staff physiatrist for evaluation and creation of a functional rehabilitation program designed to address the specific functional deficits uncovered at the time of today's examination. We believe that the chances of functional restoration in patients who suffer from chronic pain conditions with concomitant physical deficits is significantly increased through the use of our monitored rehabilitation equipment that is specifically designed to both promote neuromuscular reeducation as well as objectively document progress during the course of therapy.

Sleep Evaluation

Based upon the evaluation performed today (please see the Sleep Evaluation section below for details), there does not appear to be any significant sleep disorder in this patient. As such, no further evaluation is needed at this time.

Summary

I believe Mr. Patient will greatly benefit from a comprehensive, interdisciplinary approach to the assessment and management of his underlying chronic pain condition, consistent with the diagnosis of post laminectomy syndrome with discogenic and arthritic components.

- Initial evaluation will include obtaining a CT of the lumbar spine to evaluate for spinal pathology that is contributing to the patient's pain condition. This will be reviewed prior to our initial treatment.
- Depending on the findings of the patient's CT, we likely will pursue a series of lumbar epidural steroid injections to address symptoms of discogenic origin. We may also consider performing diagnostic/therapeutic lumbar zygapophyseal joint denervation as well.
- I also had a discussion with the patient regarding the use of spinal cord stimulation as possible therapy for neuropathic pain. We will discuss this further at a later visit as appropriate.
- Mr. Patient will also begin the enrollment process for our medication management program as described above. The goal of this program is to minimize side effects while maximizing symptom relief and preventing opioid dose escalation.
- The patient will also be evaluated by our staff physiatrist to address the functional deficits noted on today's exam, and to prescribe a course of directed functional rehabilitation.

Further recommendations for treatment will be dependent upon the results of our initial diagnostic evaluation and response to our initial therapies. Thank you very much for referring this patient to Boston PainCare Center. I look

forward to assisting you in providing for the pain care needs of this patient in the future.

Lee Silk, MD

Behavioral Assessment

Health Status Questionnaire (SF-36)

The Health Status Questionnaire (SF-36) measures the following eight health attributes: health perception, physical functioning, physical role in activities of daily living, emotional role in activities of daily living, social functioning, bodily pain, mental health, and energy/fatigue. The purpose of this evaluation is to objectively measure the impact a condition is having on the patient's quality of life. The following areas have scored below the normative range:

Health perception
Physical functioning
Physical role in daily living
Social functioning
Bodily pain
Energy/fatigue

Quadruple Visual Analogue Scale

The Quadruple Visual Analogue Scale (QVAS) is based on four specific factors: 1. Pain level at the time of the current office visit. 2. Typical or average pain since the last visit (or since the initial visit, or since the onset of the condition) depending on the chronicity of the condition. 3. Pain level at its best since the last office visit, time of intake, or since the onset of the condition. 4. Pain level at its worst since the last visit, time of intake, or since the onset of the condition. The final score (0-100) is then categorized as "low intensity" (pain < 50) or "high intensity" (pain > 50).

This patient's total score is **70/100** which is categorized as a **"high intensity"** pain score.

Waddell Nonorganic Low Back Pain Signs

The Waddell Nonorganic low back pain signs are objective measures for evaluating abnormal psychosocial issues. The result of the nonorganic test is reported as either a positive or a negative.

This patient's current Waddell Nonorganic Low Back Pain Sign is **4/5**, indicating a **positive** response for nonorganic provocation of pain.

Pressure Tolerance

The patient's pressure pain tolerance was objectively evaluated using a computerized algometry system. Pressure pain tolerance quantifies the amount of pressure the patient can tolerate over muscle and/or bone.

Pressure Tolerance Test reveals that this patient presents as **low** pain tolerant.

Sleep Evaluation

Epworth Sleepiness Scale

The **Epworth sleepiness scale** is a questionnaire intended to measure daytime sleepiness. This can be helpful in diagnosing sleep disorders. It was introduced in 1991 by Dr Murray Johns of Epworth Hospital in Melbourne, Australia.

Epworth Sleepiness Scale Score: 07

Interpretation

The score obtained by adding the numbers leads to a total:

- 0 - 9 - average score, normal population
- 10 - 24 - sleep specialist advice recommended

The Epworth Sleepiness Scale has been validated primarily in obstructive sleep apnea. It is used to measure excessive daytime sleepiness, and is repeated after the administration of treatment (e.g. CPAP) to document improvement of symptoms.

Clinical note: This patient presents with several risk factors for a potential sleep disorder. Factors include: long term high dosage of opioid therapy, reporting of sleep interruption.

Boston PainCare Center

DAVID DIBENEDETTO, M.D.
FERNANDO BAZOBERRY, M.D.
DOUGLAS KEENE, M.D.
LEE SILK, M.D.
RAKESH DHAR, M.D.
JAMES O'BRIEN, M.D.
DONALD COUNIHAN, D.C.

JACKIE ORENT-NATHAN, FNP BC
MARY JANE ESTRADA-LYDER, ARPN BC
OLUWATOKE MAYAKI RN, NP-C
LARA HARRIS-DAVID, LICSW
EDWARD MCCARTHY, LICSW
AMY BENOIT, P.T.
DEBORAH MURRAY, P.T.A.

Physical Performance Measurement

The Physical Performance Measurement provides objective baselines of physical performance. These baselines can track outcomes in an active care program when repeated during the course of active care and/or at the conclusion of the treatment program. The Physical Performance Measurement provides an outcome measurement instrument that can be used both as an objective barometer for measuring change in function over time, and as an aid in determining weak functional links to be addressed specifically in the treatment program. The Physical Performance Measurement is designed not to replace but, rather, to compliment other qualitative, less objective, tests such as end-feel palpation, postural and gait analysis, and observation of altered movement patterns.

Range of Motion - Inclinometry

Spine Range of Motion

The patient's active range of motion was objectively evaluated with Tracker ROM from JTECH Medical using the dual inclinometry protocols outlined in the AMA Guides to the Evaluation of Permanent Impairment.

Lumbar ROM	Norm	Result	Difference	% Norm
Lumbar Flexion	60°	24°	36°	**40%**
Lumbar Extension	25°	6°	19°	**24%**
Lumbar Lateral Left	25°	13°	12°	**52%**
Lumbar Lateral Right	25°	12°	13°	**48%**

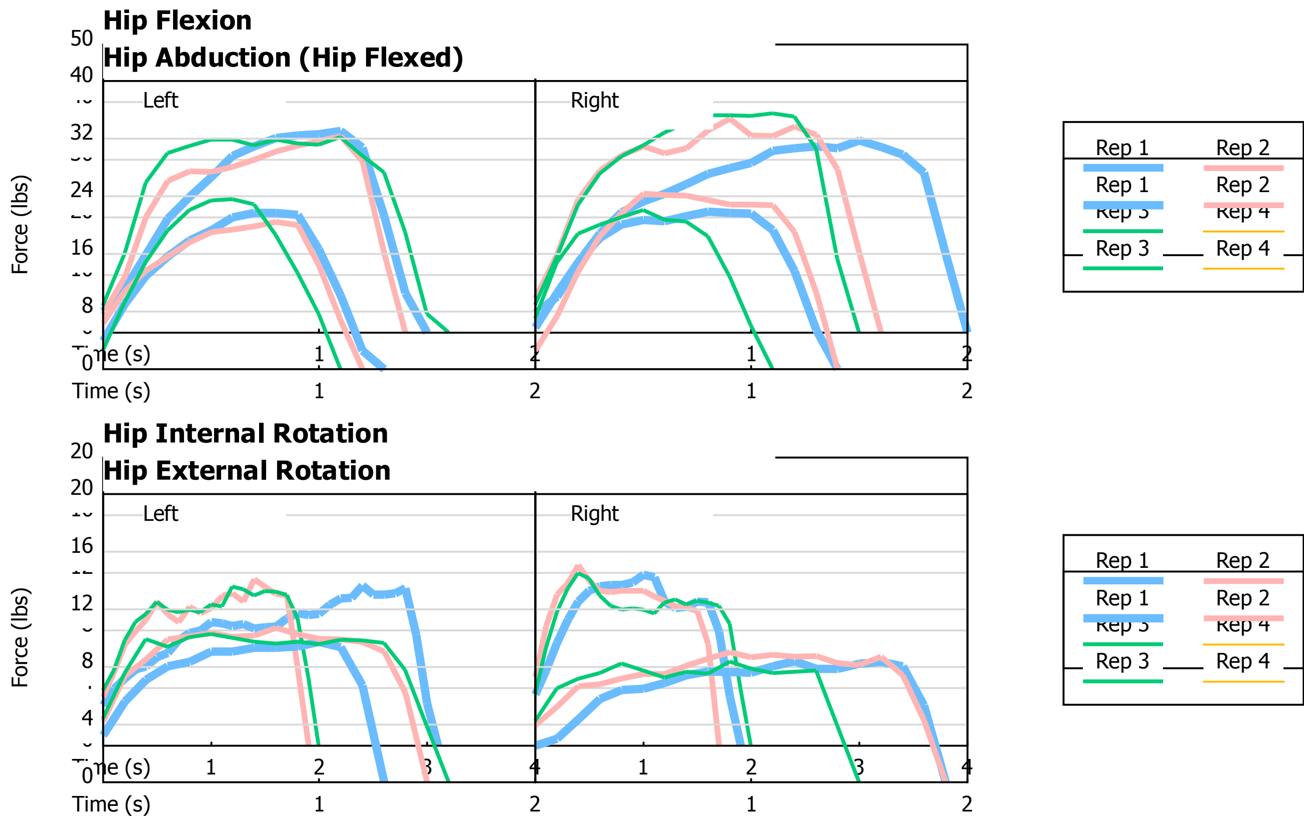
Unless otherwise noted, the table(s) above show current test results compared to American Medical Association normative values.

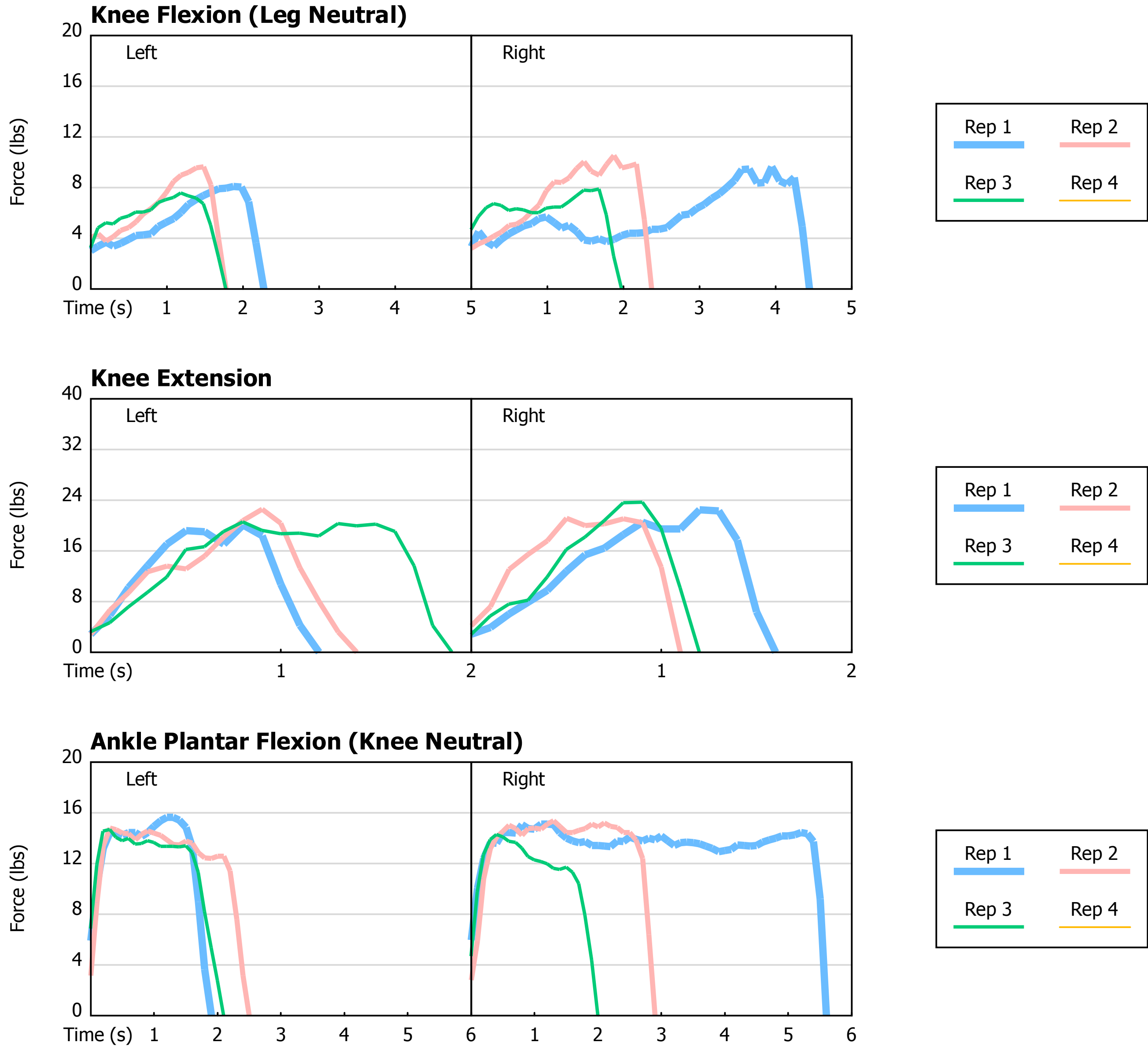
Muscle Strength Testing

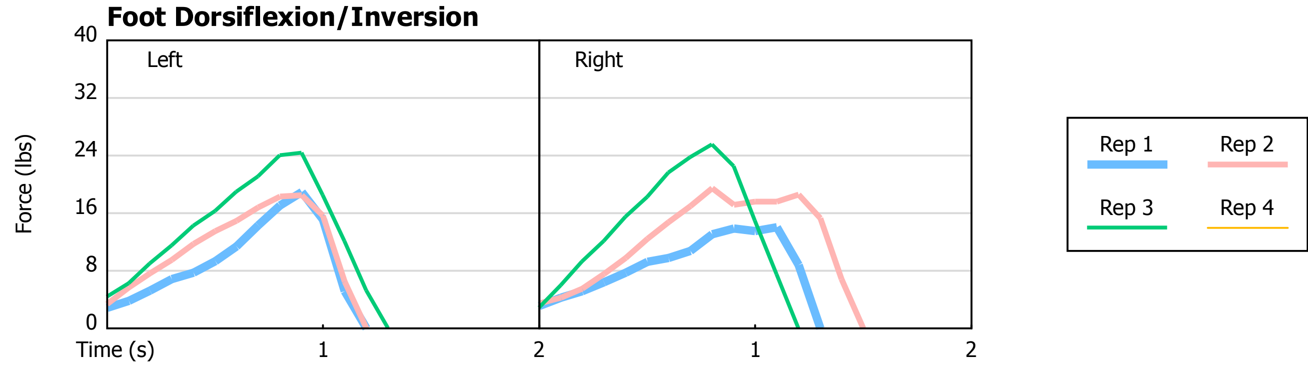
Muscle Tests

The patient was tested using the JTECH Tracker system, a computerized muscle strength evaluation system. When compared to the opposite side, a strength difference greater than 15% is generally recognized as an indication of motor deficit.

	Result		CV		
Lower Extremity Muscle Tests	**Left**	**Right**	**Left**	**Right**	**Difference**
Hip Flexion	34.9 lbs	37.9 lbs	1%	5%	**-8% L**
Hip Abduction (Hip Flexed)	23.6 lbs	24.4 lbs	5%	5%	**-3% L**
Hip Internal Rotation	11.6 lbs	12.5 lbs	2%	2%	**-8% L**
Hip External Rotation	10.7 lbs	9.0 lbs	3%	3%	**-16% R**
Knee Flexion (Leg Neutral)	9.6 lbs	10.6 lbs	10%	11%	**-9% L**
Knee Extension	22.6 lbs	23.6 lbs	5%	4%	**-4% L**
Ankle Plantar Flexion (Knee Neutral)	15.6 lbs	15.4 lbs	2%	3%	**-2% R**
Foot Dorsiflexion/Inversion	24.4 lbs	25.5 lbs	13%	23%	**-4% L**


Hip Flexion
Hip Abduction (Hip Flexed)
Left
Right
Force (lbs)
Time (s)
Rep 1
Rep 2
Rep 3
Rep 4
Hip Internal Rotation
Hip External Rotation


Knee Flexion (Leg Neutral)
Left
Right
Force (lbs)
Time (s)
Rep 1
Rep 2
Rep 3
Rep 4
Knee Extension
Left
Right
Force (lbs)
Time (s)
Rep 1
Rep 2
Rep 3
Rep 4
Ankle Plantar Flexion (Knee Neutral)
Left
Right
Force (lbs)
Time (s)
Rep 1
Rep 2
Rep 3
Rep 4


Foot Dorsiflexion/Inversion
Left
Right
Force (lbs)
40
32
24
16
8
0
Time (s)
1
2
1
2
Rep 1
Rep 2
Rep 3
Rep 4