MES SOLUTIONS SINCE 1978

Stephen Borowsky, M.D.
Anesthesiology/Pain Medicine

Date of Exam: July 14, 2011

Claimant:	Timothy Waldrep
Date of Incident:	May 28, 2010
MES File #:	21711009070
Date of Birth:	March 16, 1979

Referring Party:	Crawford and Company
Referred by:	Denise Cook
Claim #:	557-91945

Dear Ms. Cook:

At your request, Mr. Timothy Waldrep was seen for an independent medical evaluation on July 14, 2011, regarding the injury of May 28, 2010.

Prior to evaluation, it was explained to the examinee that this appointment was for purposes of evaluation only - not for care, treatment or consultation - and therefore, no doctor-patient relationship would result.

The examinee has also been advised that I am an independent doctor and have been requested to conduct this evaluation by the individual noted above. The examinee was informed that a report will be generated and that report will be forwarded to the requesting party. Mr. Waldrep was also advised that it is not my intention to cause excessive pain and/or discomfort during the examination and to inform me if there are any particular maneuvers that do cause excessive symptomatology.

HISTORY OF PRESENT INJURY

Timothy Waldrep is a 32 year old male who was injured on May 28, 2010, when working as a traffic control employee at the University of Phoenix Stadium. His left foot was run over by a vehicle. The employee had worked in this job since October 21, 2008.

At the time of the injury he had fallen back and had increased pain in his hip and was then seen at Banner Estrella with a diagnosis of foot contusion and strain of the hip.

There was a significant past history of an open left hip acetabular labral repair and proximal femur osteoplasty for femoral acetabular impingement on November 30, 2009, by Dr. Wilmink. From that condition he was discharged on February 19, 2010.

The claimant came under the care of Dr. Wilmink for this current injury and had an MRI of the left foot on June 8, 2010. MRI noted third and fourth metatarsal contusions without fractures; tibial sesamoid fracture with associated contusion; subcutaneous edema about the posterior lateral ankle and dorsum of the forefoot; intact Lisfranc ligament.

Dr. Wilmink on June 15, 2010, noted the left foot Lisfranc foot sprain of the third and fourth metatarsal contusions and a left hip strain. The plan was to immobilize another four weeks, utilize physical therapy, maintain off work status, and use anti-inflammatory medications.

On July 8, 2010, Dr. Wilmink noted that the claimant was not doing well and that he had hip symptoms similar to those before his 2009 hip surgery. There was heterotopic ossification of a left hip secondary to traumatic injury and there was left foot pain related to the mid foot contusion and crush injury. A CT scan was ordered.

CT scan on July 9, 2010, documented a tibial sesamoid fracture of indeterminate age, and a small anterior calcaneal process fracture at the navicular articulation, appearing chronic.

A left hip injection was performed on August 5, 2010, and a left hip MRI on August 8, 2010. This MRI showed post surgical changes consistent with the prior labral tear, without visible tear/repair.

Dr. Wilmink on August 10, 2010, noted no benefit from the injection and he discontinued the CAM walking boot in favor of using a postoperative shoe.

On August 19, 2010, a fluoroscopically guided left hip arthrogram was performed with findings suggestive of a labral tear with moderate chondrosis of the anterior acetabulum and boney fragmentation from heterotopic ossification.

Dr. Wilmink on August 24, 2010, noted symptoms of RSD in the foot, although the examination in that medical record did not substantiate such diagnosis. At that time he noted that the claimant states that he was progressing well in therapy and was using crutches.

Dr. Wilmink performed surgery on September 8, 2010, of the left hip involving open removal of heterotopic bone, open arthrotomy of the left hip and repair of the anterior capsule labrum, and open resection of the prominent anterolateral bone on the femoral neck of the left hip.

Dr. Wilmink noted increased hip pain in the note of September 14, 2010. A CT of the left lower extremity showed postoperative changes compatible with labral repair with no further boney fragmentation.

An MRI of the left hip on September 15, 2010, documented postoperative change, no labral tear identified, free osseous fragment previously seen no longer identified, mild bone marrow edema, femoral neck extending into the head without fracture line, mild joint effusion with synovitis, interstitial edema in gluteus minimus muscle suggesting mild strain.

Dr. Wilmink's note of September 17, 2010, indicated the claimant had improved. However, the note of Dr. Wilmink of September 28, 2010, indicates that there was burning and nerve pain in the left foot with hypersensitivity and color changes.

Dr. Wilmink's note of November 15, 2010, indicated that the claimant had received benefit from sympathetic blocks. There were no available medical records to document the sympathetic blocks.

On December 22, 2010, the nurse practitioner for pain physician Dr. McJunkin indicated that the claimant had received 50% palliation of pain from past sympathetic blocks. The recommendation was then for radiofrequency ablation and for femoral sciatic nerve blocks. Prescription was issued for a membrane stabilizing medication, the exact specifics not documented.

An independent medical exam performed by orthopedic spine surgeon, Terry McLean, M.D., on January 25, 2011, indicated that Dr. McLean was a spine surgeon and could not comment on this case because there was no specific spine problem, but that there was an indication for a need for continued care and a pain management independent medical exam.

On February 15, 2010, Dr. Wilmink noted RSD of the right foot worsening and that it had progressed to the neck, arm and head particularly on the left side. The dose of Lyrica was increased and recommendation was made for a Florida RSD Clinic.

On February 25, 2011, the intake form for the Florida Clinic of Dr. Anthony Kirkpatrick noted the current medications to involve Lyrica 75 mg, Celebrex, Savella, and hydrocodone. Multiple objective findings were noted including color changes, atrophy, positive piloerection of the skin, swelling and allodynia. Recommendation was made for a three day ketamine treatment and heated pool exercises. It was noted that the claimant had previously declined spinal cord stimulator trial and implantation. Dr. Kirkpatrick performed four hour ketamine infusions on each of three successive days on March 1, March 2, and March 3, 2011, at the RSD/CRPS Treatment Center and Research Institute. The procedures were involving high dose ketamine considered ketamine coma, supplemented by intravenous midazolam. The infusions were at 60 mg per hour.

The claimant noted significant relief of his symptoms and the note on March 14, 2011, by Nurse Case Manager in New York Susan Bennett Dooley, R.N., indicated the claimant had returned from Florida and was 80% better.

Dr. Wilmink's subsequent note of May 10, 2011, indicated that the claimant "still has ongoing significant pain in his right foot, the opposite foot of his injury, and that he is getting increased sweats and sensitivity in his neck and arm". He stated that he continued to weight-bear in the water tank with physical therapy and this has improved. There was a note that the pain and range of motion had improved and had plateaued and the claimant was considering further treatments for his RSD at the RSD Clinic in Florida. Dr. Wilmink's physical exam noted normal appearance, affect and coordination and an antalgic gait, that the foot had significant less hair growth, that the color and appearance was normal and that he was able to palpate the foot and take him through some manner of range of motion and that there was decreased hypersensitivity compared to his last exam; that the swelling had decreased and that the right lower extremity exhibited full range of motion, normal strength and stability with no tenderness or pain on palpation.

The claimant states today that he is leaving in several days for a four day ketamine infusion by Dr. Kirkpatrick in Florida.

CURRENT SYMPTOMS

The claimant describes and diagrams his pain as involving the entirety of the left side of his body including his head, arm, thorax, back and leg, in addition to the right hand and right lower extremity. He states his pain today is at a 10/10 and circles adjectives of aching, burning, coldness, cramping, heavy, hotness, numbing, sharp, shooting, stinging type tingling continuous and nauseating. He states that he experiences swelling, purple coloration and coldness in the left foot and lower extremity. He states that he has loss of appetite, that he has headaches, depression and intolerance to cold.

The claimant states that he experiences swelling, purple coloration and coldness in the left foot and lower extremity. He states that he has loss of appetite, experiences headaches and depression and intolerance to cold. He states that subsequent to his May 2010 injury that he had been progressing well with regard to his left foot problem and was able to pick up marbles with his toes. However, after the September 2010, hip surgery, he noted a regression. Sometime in October or November of 2010, the pain "exploded" to his hands, arms and left side of his body including his face.

After improving with the ketamine infusions in March 2010, for several months, he woke up one morning with jaw pain and subsequently experienced a flare of his RSD symptoms as was previously distributed to the entirety of the left side of his body, right arm and right lower extremity.

He states that his left jaw pops but he denies any dental grinding/clinching.

CURRENT MEDICATIONS

The claimant states that he is currently prescribed hydrocodone 7.5/325 as needed and Lyrica 75 mg b.i.d. by Dr. Thompson, with minimal benefit.

The Arizona Controlled Substance Prescription Monitoring Program includes prescriptions for hydrocodone 5/500 approximately monthly, in quantity of 120, until the dosage increased with the June 14, 2011, prescription to 7.5/325. Prescriptions are from Arizona Pain Specialist (Scottsdale) N.P.'s with the June 14, prescription from William Thompson, M.D., in Chandler.

Prescriptions for hydrocodone and occasionally Oxycodone and Temazepam date back to July 29, 2009, (limited by the range of pharmacy database), prior to the May 2010 injury. These were mostly prescriptions for hydrocodone 5/500 in various quantities of 20-60, on approximately a monthly basis, with a prescription May 11, 2010, for quantity 40 by Daniel Schlecht (Ketchikan, AK). This was just prior to the May 28, 2010, injury, and oxycodone 5/325 quantity 20 was prescribed by Mandy Limberg in Phoenix, (no designation of NP or MD) on the date of the injury.

PAST MEDICAL HISTORY

The claimant denies allergies.

He has a history of appendectomy, hernia repair, and MRSA infection of the left forearm for a spider bite requiring surgery. This is in addition to the two open left hip surgeries noted above performed by Dr. Wilmink.

Past medications have included Savella and Celebrex. Catapres has not been used.

The claimant denies smoking and use of illicit substances. He drinks wine occasionally and coffee and energy drinks.

PHYSICAL EXAMINATION

The claimant was alert, oriented, ambulatory with a slow gait using a walker, weightbearing wearing a sock and no shoe on the left foot. He appears his stated height of 5'11" and weight of 250 pounds. Blood pressure was 135/82 and a pulse of 80 with pain level of 10/10. He was observed exiting the office in the same manner as noted above and enters the driver's side of a vehicle, folding and pulling up his walker after seated, and eventually driving off.

There was consistent hypersensitivity of the left lower extremity to the lightest touch, with withdrawal on almost all attempts. This was present to a much lesser degree in the right lower extremity, upper extremity and left side of his head. There was an apparent fullness in the left cheek area.

Straight leg raising was negative.

There was some desquamation on his fingers, which he relates to holding on to the side of the pool or rail while in pool therapy.

Both feet were cool to touch with the left foot dorsum averaging 2 degrees centigrade cooler on the right (infrared meter).

Lower extremity strength testing was difficult because of breakaway weakness that the claimant relates to his pain. He was able to bear weight standing and walking.

Left calf circumference was 15-3/4 compared to 17 inches on the right. There was no available comparative past measurements and that includes any measurements prior to this injury that would have been in relationship to his preexisting left hip pathology and surgery.

The feet and lower extremities exhibited no edema or sweating differences. The dorsum of the left foot had a slight ruddy coloration compared to the right. Dorsalis pedis pulses were intact bilaterally. The upper extremities exhibited no edema, color, temperature or sweating changes.

Waddell's signs, axial compression and en bloc truncal rotation were negative.

Urine drug test (Dominion Diagnostics) was performed with this IME, and detected the expected presence of Tramadol (Ultram). No unexpected prescription controlled substances of illicit substances were detected.

The following is in response to the questions posed on the MES Solutions letter of June 28, 2011.

CONCLUSIONS

1. **Based on medical evidence, is the claimant's current diagnoses of RSD and complaints causally related to his employment? Please provide the diagnosis and identify the mechanism of injury listing objective findings to support your opinions.**

   The current diagnosis and complaints, based on medical evidence, appear related to the injury of May 28, 2010. The diagnosis appears to be RSD/CRPS related to a crush injury of the left foot.

   The sudden "explosion" of RSD symptoms to almost the entire remainder of his body on two occasions appears most suggestive of psychogenic factors impacting on this condition.

   The findings on examination of the allodynia/hypersensitivity and other changes appear consistent with RSD/CRPS. The decreased girth of the left calf can be related to prolonged minimal use of the left lower extremity subsequent to this injury or possibly was preexisting, relating to issues involving his preexisting left hip pathology.

2. **Is there a preexisting or degenerative condition unrelated to the industrial injury that in your opinion would have caused these symptoms anyway? If so, to what extent are any underlying disease processes contributing to the claimant's current symptomatology? If there was an aggravation of a preexisting condition, has that condition resolved?**

   The preexisting left hip pathology would not necessarily have caused these current RSD/CRPS symptoms. There was no history of these symptoms appearing prior to the May 28, 2010, injury.

3. **Does the claimant require further curative care for a causally related RSD condition? If so, please provide a time constrained treatment plan to include type, frequency, and duration, including surgical intervention if felt to be indicated.**

   The claimant requires further care for this RSD/CRPS condition. First with the strong suggestion of a psychogenic factor involved in the sudden spread of his RSD symptoms on two occasions, with his expressed 10/10 pain symptoms and normal vital signs, and with the failure of multiple past treatments, the presence of psychological/psychiatric issues must be considered. Therefore, a psychiatric IME is most strongly recommended at this time.

   Medication management can continue as is presently prescribed.

4. **In your professional opinion, has the claimant reached a permanent and stationary status from the industrial injury on 5/28/2010?**

The claimant has not reached a permanent and stationary status.

5. **Is the claimant capable of returning to his pre-injury employment with or without restrictions, full or part-time? If work is restricted, please indicate specific restrictions and duration. Are the work restrictions permanent?**

The claimant is not capable of returning to his pre-injury employment at this time.

6. **Is there objective medical evidence of a permanent impairment? If so, please rate the percentage of impairment in accordance with the AMA Guidelines, 6th Edition.**

The issue of permanent impairment will have to be decided at a future date.

7. **Is supportive care indicated for a causally related condition? If so, please provide specific recommendations and duration.**

Supportive care is not an issue at this point.

8. **Has your review of the claimant's records led you to determine treatment has been appropriate?**

The treatment to date involving surgery, medication management, therapy and sympathetic blocks appears appropriate. There is concern over the use of ketamine infusions in this case. With the strong suggestion of psychogenic source to much of the symptom complex, psychiatric/psychological assessment would have been best performed prior to any consideration for ketamine infusion therapy. The ketamine infusion technique has been around for a number of years but yet must still be considered on an experimental basis especially with the technique utilized by Dr. Kirkpatrick utilizing high dose ketamine infusions in a "ketamine coma". There are articles that exist commenting on these issues, and an editorial in Pain Medicine, Volume 3, Number 4, 2002, 294-297, states "psychotropic side effects of ketamine in particular limit its applicability and clinical practice of pain medicine. Hallucinations and disassociated phenomenon are the most common limiting adverse effects of this drug. This is present even after a short single dose infusion therapy. There are multiple references with the editorial, and in the same journal is an article by Hurbut and Correll, titled "Successful treatment of a nine year old case of complex regional pain syndrome Type I (reflex sympathetic dystrophy) with intravenous ketamine infusion therapy in a warfarin anticoagulated adult female patient." This treatment was performed in Arizona and the authors state "we report the first successfully treated case of CRPS pain using this technique in North America." The infusions used in this treatment involved a range of ketamine from 10 mg per hour to 30 mg per hour with a continuous infusion for six days with tapering back to 10 mg per hour before discontinuance.

There are various other studies dating back to 1994.

In 2009 in the journal Pain 146 (2009) 18-25 is a study by Finch Knudsen and Drummond titled "Reduction Of Allodynia In Patients with CRPS A Double Blind Placebo Controlled Trial of Topical Ketamine." They stated that the studies showed promise for the use of topical ketamine as opposed to parenteral and oral forms which often result in undesirable side effects.

Another article in Pain (2009) 304-311 by Sigtermans et al titled "Ketamine Produces Effective In Long Term Pain Relief In Patients With CRPS Symptoms." This study involved a multiple day infusion of ketamine and resulted in significant pain relief without functional improvement. The dosage used here was averaging 22.2 milligrams per hour. They summarize that treatment with Ketamine was safe with psychotomimetic side effects that were acceptable to most patients.

It should be noted that all of these studies have involved what are considered low dose infusions of ketamine as opposed to Dr. Kirkpatrick's high dose ketamine coma therapy.

The important fact is that "ketamine is neurotoxic and a drug of abuse". This is noted in an article in Pain 150 (2010) 10-11 titled "Commentary Intravenous Ketamine For CRPS Making Too Much Of Too Little?" They went on to state "the NMDA receptor is involved in learning and memory processing and frequent abuse of ketamine has been shown to cause long lasting memory impairment and altered prefrontal dopaminergic function". They were concerned that "repeated administration of ketamine in sub-anesthetic doses is reported in animal studies to cause sensitization, a characteristic of drugs such as cocaine. If there are risks associated with repeated intravenous treatment and a chronic pain population, we need at least some safety data before repeated intravenous infusions of ketamine can be considered a routine treatment option".

In another article in Pain 141 (2009) 210-214, "Topical Review Ketamine For Chronic Non Cancer Pain" by Bell states that "The current literature suggests that ketamine in sub-anesthetic doses can provide short term relief of refractory neuropathic pain in some patients. The size and scope of controlled clinical trials to date are insufficient to support longer term use in any particular chronic pain disorder. Ketamine is a drug of addiction with neurotoxic effects and unpleasant adverse affects. There are long term safety issues indicating a need for caution."

In summary it appears that the first concern is that of a significant psychological/psychiatric issue involved in the symptom complex in this claimant's condition. It is critical that a psychiatric IME be performed at this time. With the above documentation of concerns for neurotoxicity and concerns for caution in the use of ketamine infusions, it is not possible to recommend its use under the current regimen. It should be noted that generally the literature indicates that there is generally improvement in pain of a short term nature with no functional improvement. Therefore, continued use of the infusions and especially the high levels utilized has potential neurotoxic and unknown future complications.

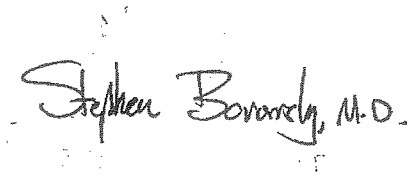
9. Do you have any additional thoughts after reviewing the records and performing the examination?

No.

Thank you for allowing me to evaluate Mr. Timothy Waldrep. If you have further questions, please do not hesitate to contact me.

I declare that the information contained within this document was prepared and is the work product of the undersigned, and is true to the best of my knowledge and information.

Sincerely,



Stephen Borowsky, M.D.

Dictated, reviewed, and opinion verified.

SB/et-qs