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Original Articles

Reprints & Abstracts

Case History

Case Report – Coagulopathy Hemorrhage that Mimicked Sciatic Pain

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Introduction:

In our society, chiropractic physicians provide valuable services in a primary care setting. Patients often seek chiropractic care without a medical referral or having undergone prior medical evaluation. It is essential that chiropractors completely assess the patients in their care in a comprehensive manner.

The utilization of advanced diagnostic protocols provides valuable insight into the care of patients. Magnetic Resonance Imaging (MRI) provides diagnostic utility that is extremely important in clinical practice. MRI is helpful in defining pathologic states that may represent possible contraindications to chiropractic care. It provides

a glimpse into the physiologic mechanisms that define normal spinal integrity. It also provides visualization of pathophysiologic affects of the chiropractic subluxation and its sequelae. MRI provides a means to objectively evaluate the affect of chiropractic care on the cellular level.

It is extremely important that chiropractic physicians embrace MRI technology in practice. The utilization of MRI is progressively increasing in the chiropractic setting. This is evidenced recently by a new MRI coursework established at chiropractic universities.

Following is a case that illustrates the utility of MRI in chiropractic practice. While the patient presented with complaints that are readily seen in the chiropractic setting, MRI allowed visualization of a significant and potentially life threatening clinical entity.

Case Report:

A 37-year old female presented to our office in acute pain and difficulty ambulating. She reported an insidious onset over 2-3 days of increasing hip, buttock and leg pain with radiation to the foot. No recent trauma was reported. She had difficulty bearing weight on the affected extremity. These symptoms progressively worsened without relief. The patient reported no urinary or bowel incontinence. She denied any abdominal pain.

The patient's past medical history was significant for heart disease. Due to a regurgitant murmur, she received a mechanical Starr-Edwards type heart valve replacement. Her medications included Coumadin therapy monitored by her cardiologist. Her Coumadin levels and clotting Pro-thrombin times were reported to be within normal limits.

The patient was nearly unable to bear weight on the affected extremity. Physical examination revealed restricted and exquisitely painful hip range of motion. Palpation revealed acute tenderness of the deep gluteal and piriformis musculature. Nerve root tension signs including SLR and seated SLR provoked hip and leg pain. The patient exhibited positive Fabere, Laguere and Hibbs tests. Kemp's test was negative. Valsalva was negative. Neurologic evaluation revealed 0/5 Achilles deep tendon reflex and +3/5 weakness of the foot plantar flexion on the affected side. Pathologic reflexes were absent.

Chiropractic subluxation was noted affecting the sacroiliac on the affected side. Lumbar spine, AP Pelvis and Hip x-rays revealed no osseous or soft tissue pathology or evidence of trauma, fracture or dislocation.

Differential diagnosis included: Synovitis of the hip; avascular necrosis of the femoral head; piriformis syndrome and lumbar radiculitis. Chiropractic subluxation of the sacroiliac joint was identified. The patient's progressively increasing pain and inability to bear weight on the affected extremity mandated advanced diagnostic testing. The decision to rule out hip pathology undetected with x-ray was made. The patient was referred for MRI evaluation of the hips without contrast.

Prior to performing the MRI, the presence of the Starr-Edwards mechanical heart valve mandated consultation with the staff radiologist to determine the safety and appropriateness of MRI for this patient. We consulted the valve prosthesis manufacturer's literature. It was confirmed that the patient's prosthesis was of low Ferro-magnetic properties and that it was safe to perform an MRI of the hip. This information attested to the safety of MRI for the model of the prosthesis implanted within our patient. The radiologist made the final decision to proceed with the MRI.

The MRI examination provided a definitive diagnosis. A large, acute hematoma was visualized deep within the buttocks affecting the gluteus maximus, medius, piriformis and adductor magnus muscles. (See Figures 1 and 2.) The proximity of the hematoma to the sciatic nerve was visualized. No bony or joint abnormalities were noted. The patient was transported to our local hospital emergency department for treatment of the visualized internal hemorrhage.

Laboratory tests confirmed that the patient suffered an internal hemorrhage due to a coagulopathy related to poorly managed Coumadin levels. She was provided supportive care during her 3-day hospital stay and recovered fully.

Discussion:

This case contains numerous factors that are interesting and instructive. While the patient exhibited symptoms commonly seen in the chiropractic office, other more emergent problems were present. Due to poor Coumadin management and medical error, the patient suffered preventable morbidity.

The demonstrated hemorrhage produced orthopedic symptoms that confounded a true diagnosis. The differential diagnosis required careful assessment and decision making. The patient's medical history of poorly managed Coumadin levels was important.

The use of advanced diagnostic imaging was critical in this case. It was necessary to ensure that the patient's prosthesis did not pose a contraindication to MRI. Rapid identification and coordination of integrated services provided the patient an optimal result.

Conclusion:

As primary care physicians, chiropractors are uniquely qualified experts of the entire body. Patients' conditions progress, change, improve and deteriorate based upon the factors of their health care status. It is requisite that caregivers take a logical and comprehensive approach to the people in their charge. This case illustrates the importance of basic evaluative tenets that include a careful review of history, inspection and examination.

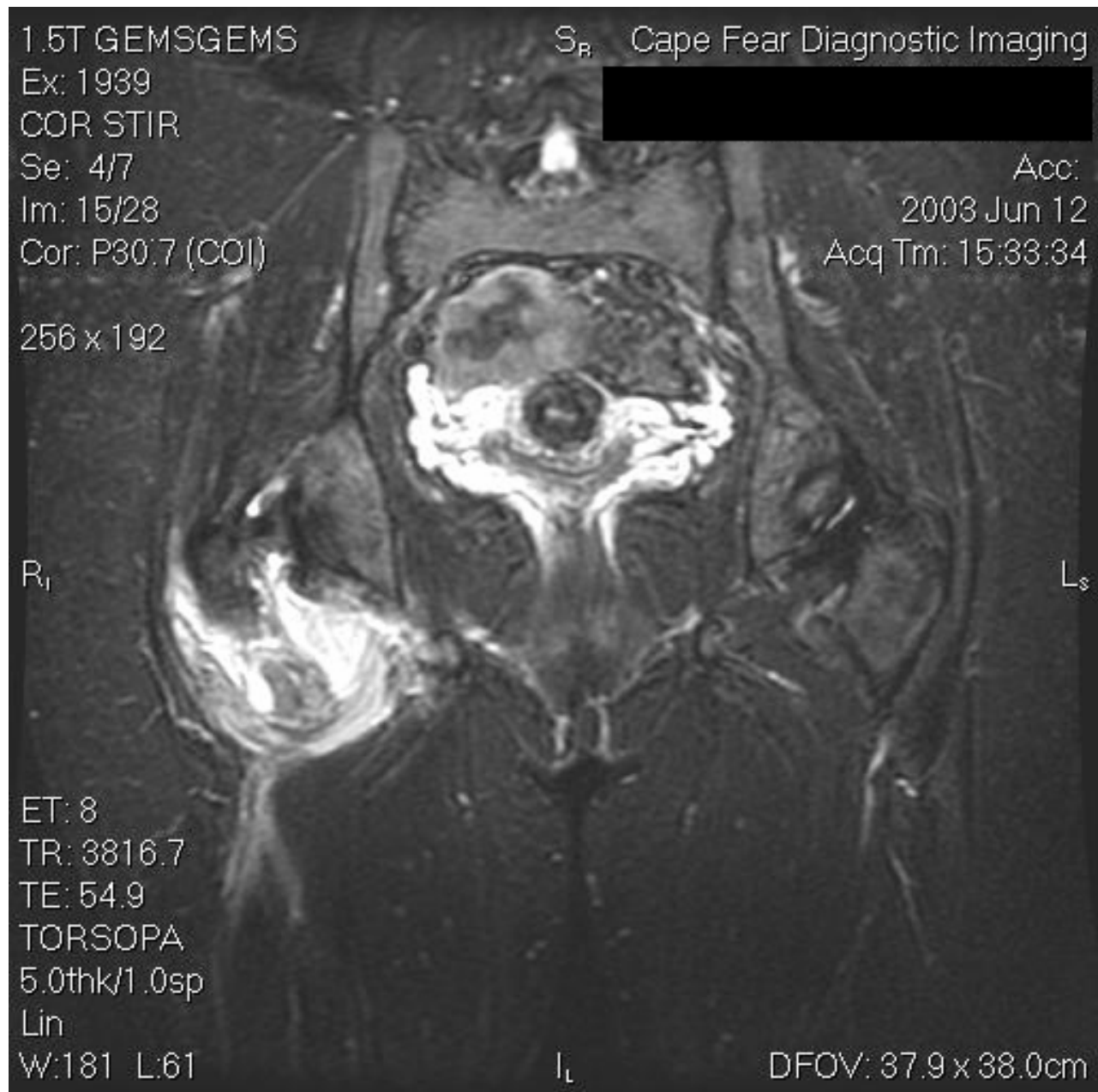


Figure 1. MRI - Coronal STIR Image – Pelvis – Increased signal consistent with deep gluteal hemorrhage due to Coumadin induced coagulopathy.

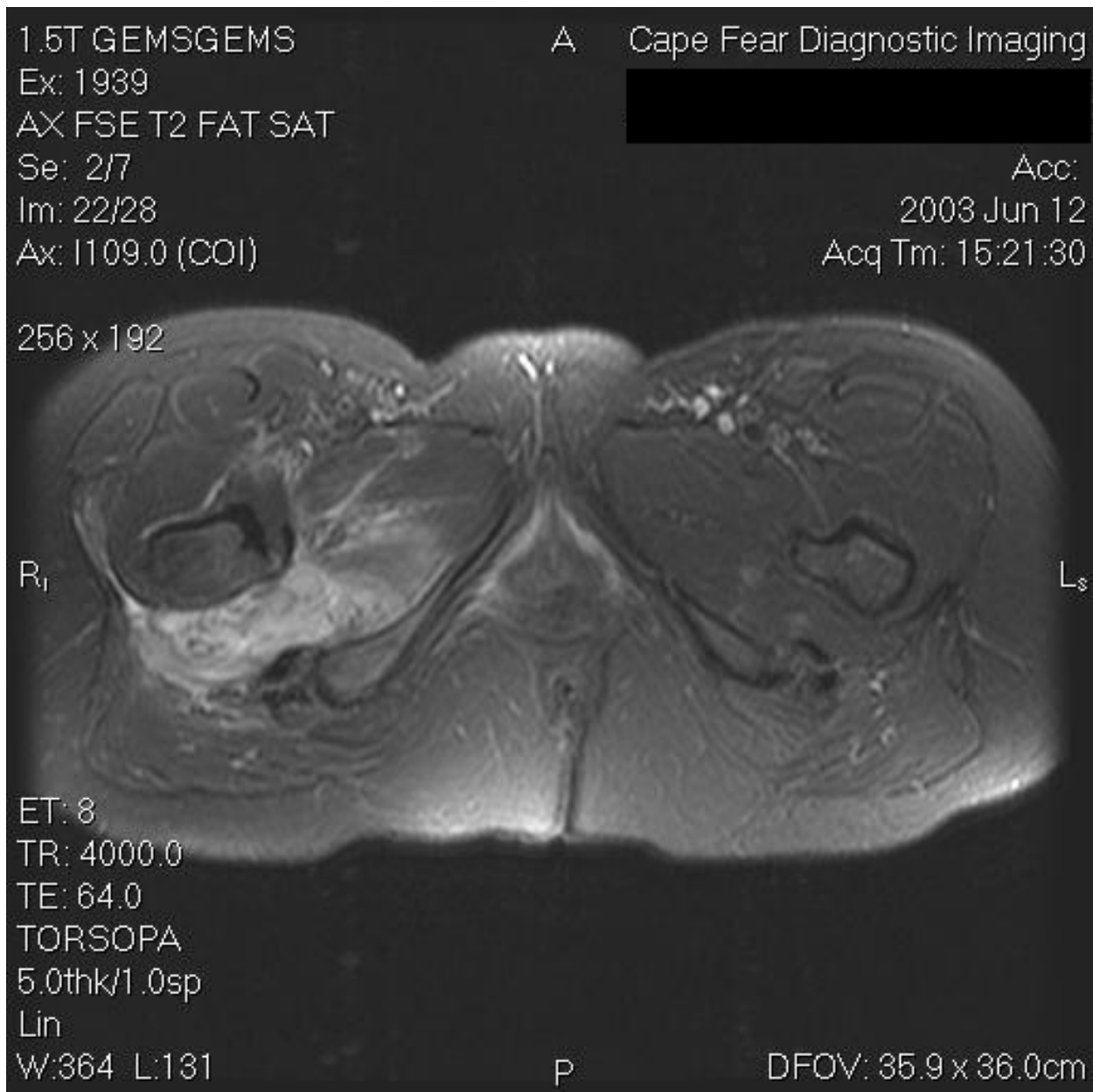


Figure 1. MRI – Axial T2 FAT SAT Image– Pelvis – Increased signal consistent with deep gluteal hemorrhage due to Coumadin induced coagulopathy.

Clinical Pearl

Review of the Literature

Stress Fractures and Related Disorders in Foot and Ankle: Plain Films, Scintigraphy, CT, and MR Imaging

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ABSTRACT

The accurate diagnosis of stress-induced changes in the foot and ankle requires careful and detailed clinical history and examination. This is of paramount importance in ensuring the correct imaging interpretation and for excluding other differential diagnoses. Advanced imaging (scintigraphy and MR imaging) plays a vital role in the early diagnosis of this type of injury, and CT has an important contributory role in the diagnosis of injury where imaging features by the other modalities are equivocal. An early diagnosis reached by judicious use of imaging techniques is the cornerstone of appropriate management, with a high probability of a full recovery, a low risk of complications, and a return to predisease activity.

KEYWORDS

Stress fracture - imaging - MR - ankle - foot

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Improved mood stability in 9 children with a broad-based nutritional supplement

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a) Background: Various individual nutrient categories (e.g., B vitamins) have been evaluated for potential mental health benefit. We are studying a broad supplement (containing primarily trace minerals). Initially, we monitored three boys aged 8-12 (one with OCD, one with PDD, and one with anxiety and mood problems) who had little in common other than their irritable, unstable mood. Prior to treatment each boy had clinically elevated Child Behavior Checklist (CBCL) scores; the supplement benefited all of them. A design reversal strengthened our observations: significant regression occurred when not taking the supplement. Based on these results, we embarked on a more rigorous open case series. b) Aim: To determine the benefit of a broad-based nutritional supplement for mood instability in children. c) Method: Nine children with mood/anxiety disorders (6 boys, 3 girls; aged 8-15 years) assessed at entry and post-treatment (8 weeks later). Parents completed the CBCL, Young Mania Rating Scale (YMRS), and the Youth Outcome Questionnaire (YOQ). d) Results: After 8 weeks, improvement was significant on 7 CBCL scales: withdrawn ($t(8)=3.79$, $p<.01$); anxiety problems ($t(8)=2.97$, $p<.05$); social problems ($t(8)=2.89$, $p<.05$); thought problems ($t(8)=3.67$, $p<.01$); attention problems ($t(8)=3.85$, $p<.01$); delinquent behaviour ($t(8)=3.71$, $p<.01$); and aggressive behaviour ($t(8)=3.46$, $p<.01$). The YOQ and the YMRS also significantly improved: $t(8)=5.97$, $p<.001$, $t(3)=4.54$, $p<.05$, respectively. Treatment side effects were minor and transitory. e) Conclusions: Mood instability may be treated more effectively by a broad supplement rather than single ingredients. Nutritional supplementation for the *target symptoms* (mood instability) rather than a particular *diagnostic category* seems warranted.

Current Events

Attribution

Ed Payne, FCER,