Chiropractic management of reduced hip mobility associated with avascular necrosis and systemic lupus erythematosus:  
A case report

Matthew S. Arthur ¹ and Matthew F. Funk DC ²
University of Bridgeport College of Chiropractic

History
33 year old female presented to the UBCC Clinic with a chief complaint of neck pain and trouble turning her head, and secondary complaint of right hip pain. She was referred to the Chiropractic Clinic from the UBCNM Clinic, where she was undergoing naturopathic treatment for weight loss, pain, and symptoms of systemic lupus erythematosus (SLE).


Secondary complaint: Right hip pain, associated with avascular necrosis (AVN). Pain increased with walking for more than a few minutes, and made better with rest.


Physical Examination
Vitals: blood pressure, pulses, temperature, respiration all normal.
Weight: 197 lbs; Height 62.5 inches.
Postural Exam: Upper Crossed Syndrome:

Pain and hypertoncity in bilateral: upper trapezius, levator scapulae, pectoralis maj/min with myofascial trigger points. Cervical ROM limited with local pain on extension. Joint dysfunction at C3-C4-C5 lat flex/rot bil. C7-T1-T2 lat flex restrictions. Lumbar spine ROM was normal and pain free. Anterior pelvic tilt with greater trochanter lower on right. Gait analysis: Patient walks with limp, Paintful, hypertonic and shortened right psosas, rectus femoris, glutaeus max/min.


Diagnoses
- Cervical and thoracic joint dysfunction, myofascial trigger points, postural syndrome.
- Decreased R hip mobility, AVN and SLE.

Discussion
Systemic lupus erythematosus is an autoimmune disease with increased prevalence in young women. Antibody-protein complexes clump together and affect vasculature, heart, skin, kidneys, joints, liver and nervous system. [1,2] SLE is treatable but not curable.

Common SLE problems include:
- Lung, Heart, Kidney
- Joint disease
- Muscle pain
- Malaise, Fatigue
- Raynaud’s
- Decreased cognition
- Butterfly rash
- Alopecia

Avascular necrosis is cellular death of bone components due to interruption of blood supply typically resulting in collapse, bone destruction, pain and loss of joint function [3]. It has been proposed that AVN is caused by non-traumatic arterial disruption, which leads to subchondral bone necrosis. Intrinsic vascular factors such as SLE induced vasculitis, vasculopathy, Raynaud’s and presence of anti-phospholipid antibodies may predispose SLE patients to AVN.[1] Some studies suggest that these factors may not individually cause AVN, but the combination of two or more may increase the risk.

Avascular necrosis with flattening of the femoral head and arthritic changes. Patients may undergo total hip replacement or joint resurfacing surgery.

Initial Response
Immediately following the 1st treatment, the patient stated her neck pain had improved. On the following visit, she reported hip soreness after 1st hip treatment, but hip ROM had slightly increased.

4 Week Outcome
Neck pain had significantly reduced, and pain was graded as 1-2/10. Hip ROM had increased, and walking for long periods of time had become easier. Treatment continued at 2x per week for 2 more weeks, then 1x per week for 2 weeks.

Therapeutic Exercises
On 6th visit, exercises were prescribed for bilateral hip ROM. A red Theraband was given with instructions to perform flex, ext, int rot, ext rot, abduction, adduction exercises standing while supporting herself on a chair. She progressed to standing on one leg without support. Exercises were prescribed to be performed 2 sets of 10-15 reps per motion, 3x a week.

8 Week Outcome
Continued exercises and increased strength. Gait imbalance became less apparent. Patient decided to stop taking vicodin. She reported that of unaffected hip.

Current Status
Patient’s hip pain has been reduced and now is minimal. ROM has increased substantially, now similar to that of unaffected hip. Patient lost a total of 50 lbs! She decided to stop taking vicodin. Her mood has improved significantly. Patient currently visits office on an as needed basis.

Conclusion
This report demonstrates the potential of manual chiropractic treatment with exercise prescription and naturopathic nutritional management in the treatment of a patient with cervical pain and reduced hip mobility associated with AVN and SLE.

Therapeutic Exercises
- Post isometric relaxation was performed on the cervical and thoracic restrictions; Therapeutic Exercises
- Chiropractic Manipulative Therapy was performed on cervical and thoracic restrictions; Post isometric relaxation was performed on the bilateral upper trapezius, levator scapulae, pectoralis maj/min, right psosas, right rectus femoris, right glutaeus max/min;
- Grade IV Mobilization was performed on the hip for flex, ext, abduction, adduction, int and ext rotation.

Treatment Plan
Chiropractic Manipulative Therapy was performed on cervical and thoracic restrictions; Post isometric relaxation was performed on the bilateral upper trapezius, levator scapulae, pectoralis maj/min, right psosas, right rectus femoris, right glutaeus max/min;

References

¹ 8th semester Chiropractic Intern
² Associate Professor of Clinical Services