The efficacy of ultrasound guided glenohumeral joint injections of platelet rich plasma (PRP) versus hyaluronic acid (HA) in the treatment of glenohumeral osteoarthritis: a randomized, double-blind control trial.

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Purpose:
To determine whether ultrasound-guided PRP and/or HA injections can be used reliably to decrease pain, restore function, and improve quality of life in participants with chronic glenohumeral osteoarthritis that is refractory to conservative management (including corticosteroid injections). To our knowledge, there are no published studies comparing the efficacy of these two treatments.

Design:
Patients will be randomized in a 1:1 fashion to: ultrasound guided glenohumeral HA alone or PRP injection treatment group.

HA only group will receive one 6 mL injection of low molecular weight Hyalgan HA preparation. Needle guidance and injection will be performed under ultrasound to the affected glenohumeral joint, posterior approach, by a fellowship trained physician. The syringe will be covered with an opaque shield to blind both the patient and treating physician.

PRP only group will undergo the same above procedure as the HA only group in respect to ultrasound guidance, anatomic approach, and double blinding. Prior to injection, each sample in the PRP group will be sent to the laboratory by a member not involved in the study for hemoglobin/hematocrit, WBC, and platelet counts for later analysis.

Shoulder Pain and Disability Index, American Shoulder and Elbow Surgeons Society Standardized Shoulder Assessment Form, North American Spine Society Patient Satisfaction Index, and additional outcome measures on well-being and safety will be collected at baseline and 4, 8, 12, and 24 weeks post-injection.

Inclusion Criteria:
- Glenohumeral OA confirmed on MRI within past 6 months
- Pain (≥ 5/10 on VNS) from 1˚ or 2˚ glenohumeral OA
- ≥ 3 months of pain persisting after conservative treatment (including corticosteroid injection)
- 18-100 years old
- English speaking/literate

Exclusion Criteria:
- Painful active, concurrent cervical spine conditions
- Coagulopathy, bleeding dyscrasia, or platelet count <150,000/cubic mm
- Allergy to poultry or viscosupplementation
- Corticosteroid injection to affected shoulder within past 3 months
- Viscosupplementation or PRP injection to affected shoulder within past 6 months
- Presence of acute fracture
- History of shoulder tumor
- Known uncontrolled systemic illness
- Physchiatric and somatoform disorders
- Workers' compensation or active litigation involving affected shoulder
- Non-English speaking/illiterate

If you would like more information about the study, please contact the Department of Physiatry Research Assistant:

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