

# OSTENIL HYALURONAN FOR INOPERABLE ARTHRITIS OF THE SHOULDER

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## 1. Introduction

- Degenerative disease of the shoulder can be extremely painful and debilitating
- Shoulder Arthroplasty is the treatment of choice for pain relief where the pain is not controlled with analgesics and NSAIDs.
- However, some patients are not medically fit enough for surgery or refuse surgery. In these patients options are limited.



Advanced Cuff Arthropathy of the Shoulder in an elderly medically unfit patient

- Hyaluronans are a normal proteoglycan component of hyaline cartilage and synovial fluid, and play an important role in joint lubrication and metabolism.
- Hyaluronans offer anti-inflammatory properties, mechanical barrier to pain receptors and inflammatory cells, reduce free radicals and stimulate endogenous hyaluronan production <sup>1,2,6</sup>.
- Exogenous Hyaluronans have been shown to be beneficial in Osteoarthritis of the knee and rotator cuff disease in the shoulder <sup>1-5</sup>.

## 2. Aim

To assess the efficacy of Ostenil (TRB Chemedica) in the treatment of shoulder arthritis in patients not suitable for shoulder surgery.



## 3. Methodology

- Seven patients presenting to a busy shoulder service over a two year period
- With disabling arthritis of the shoulder
- Too medically unfit or refused shoulder replacement surgery.
- All patients received a course of three Ostenil injections into the glenohumeral joint at weekly intervals.
- Patients were assessed pre-injection and at three months post-injection using the Constant Score and additional quality of life questions.



## 4. Results

- The mean patient age was 83 years (range 72 to 93), including six females and one male.
- Five patients had osteoarthritis, one rheumatoid arthritis and one cuff arthropathy.
- The mean pre-injection Constant Score was 15.5 (10-25).
- The mean Constant Score at three months was 49.5 (25-84).
- Pain was improved significantly by the injections from 11.6 (10-14) to 4.7 (0-9).
- All patients had their sleep disturbed by pain prior to the injections. Only three had some disturbance of sleep at three months post-injection, with none having their sleep disturbed at all times after the injections.
- Subjective shoulder elevation improved from chest level to hand above head, whilst objectively it improved from 61.8 degrees (30-90) to 92.1 degrees (60-130). Patient satisfaction (on a scale of 0 to 10) improved from 1.3 (0-2) pre-injection to 8.4 (4-10) following the injections.

Table of Results

	Pre-injection	3 months post-injection
Constant Score	15.5 (10-25)	49.5 (25-84)
Pain (VAS:0-15)	11.6 (10-14)	4.7 (0-9)
Subjective Range of Motion	Chest level	Above Head
Shoulder Elevation	61.8 degrees (30-90)	92.1 degrees (60-130)
Patient Satisfaction (%)	13 (0-20)	84 (40-100)

## Conclusion:

Ostenil Hyaluronan appears to reduce pain and improve patient satisfaction in patients with advanced arthritis of the shoulder.

## References

1. Coutts RD, Waddell DD. Viscosupplementation for osteoarthritis of the knee. *Orthopedics*. 2004 May;27(5):470-1.
2. Leardini G., Perbellini A., et al. "Intra-Articular Injections of Hyaluronic Acid in the Treatment of Painful Shoulder," *Clinical Therapeutics* 1988/ Vol 10.No.5.
3. Raynauld J.P., Choquette D., et al. "Hylan versus Triamcinolone Acetonide Injection for Acute Supraspinatus Tendinitis: Early Report of a Randomised Controlled Trial," *Arthritis Rheum* (1994) 37 Supp. 9 (S346)
4. Abatangelo G., O'Regan M. "Hyaluronan: Biological role and Function in Articular Joints" *European Journal of Rheumatology and Inflammation* 1995; 15: 9-16
5. Shibata et al. Presented at the AAOS, Anaheim, Ca. Feb 1999. Press release from the Academy News Newsletter. 05/02/1999. "Hyaluronate Sodium Eases Pain of Rotator Cuff Tear."
6. Simon LS. Viscosupplementation therapy with intra-articular hyaluronic acid - fact or fantasy? *Rheum Dis Clin N Am*. 1999. 25(2): 345-357.



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