HYALURONAN VS. STEROID INJECTION
FOR SUBACROMIAL IMPINGEMENT OF THE SHOULDER

Lennard Funk
Department of Orthopaedic Surgery, Salford Royal Hospitals, Manchester, UK

1. Introduction
- Subacromial impingement is a common shoulder problem
- Corticosteroid is the traditional substance injected into the bursa
- Corticosteroids are associated with complications, such as tendon rupture, hyperglycaemia and lipatrophy 5,7,8

- 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 1,2,6.
- Exogenous Hyaluronans have been shown to be beneficial in Osteoarthritis of the knee and rotator cuff disease in the shoulder 1-5.

2. Aim
To compare a synthetic Hyaluronan (Ostenil) to a corticosteroid injection (Depomedrone) for primary subacromial impingement of the shoulder.

3. Methodology
• Thirty one patients with primary subacromial impingement of the shoulder.
• Randomly given a subacromial injection of either a 40mg Depomedrone or Ostenil.
• No patients had undergone previous surgery.
• All had physiotherapy following the injection.
• Patients were given a Pain Diary with a ten point visual analogue scale to complete over a three month period.

4. Results
• There was no difference between the two groups with regard to age and sex.
• Both steroid and Ostenil reduced the pain score in the first two to four hours post-injection
• In the Depomedrone group the pain score increased significantly from 12 hours to 3 days post-injection. This effect was not observed with Ostenil.
• This difference was significant (p<0.05) between 18 hours and 3 days post-injection.
• From 4 days the pain score is similar, with an equal reduction in pain in the two groups.

Conclusion:
Ostenil Hyaluronan appears to be as effective as Depomedrone in reducing subacromial impingement pain, but does not produce the pain surge associated with Depomedrone in the first few days post-injection.

References: