#2314 - Posters

Proper Site Of Steroid Injection For The Treatment Of Idiopathic Frozen Shoulder: A Randomized Controlled Trial

Orthopaedics / Shoulder & Upper Arm / Conservative Treatment

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Keywords: Frozen Shoulder, Pathophysiology, Corticosteroid Injection

Introduction
In a clinical setting, inflammation of the subacromial bursa, as well as the joint capsule, can be detected during arthroscopic surgery in patients with refractory frozen shoulder (FS). Some clinical trials have reported that corticosteroid injection into the subacromial bursa had an effect similar to that of intra-articular injection in the treatment of idiopathic FS. These results suggested that the subacromial bursa may be a potential pathologic lesion in idiopathic FS. However, there is no clear explanation as to whether the subacromial bursa is a major or minor clinical lesion.
Objectives
The objective is to determine whether steroid injection into the subacromial space was not inferior to intra-articular injection in patients with idiopathic FS, and whether combined injections had an additive effect.
Methods
Patients with idiopathic FS (n=126) were randomly assigned to receive ultrasound-guided intra-articular (IA group), subacromial (SA group), or combined intra-articular and subacromial injections (IA+SA group). All groups received a total dose of 40 mg triamcinolone acetonide. The outcome measures included the visual analog scale (VAS) for pain, American Shoulder and Elbow Surgeon (ASES) shoulder score, subjective shoulder value (SSV), and passive range of motion before and at 3, 6, and 12 weeks after treatment.
Results
There was significant effect of time on all measurements such that all measures improved in all groups ($P<0.001$) during the 12 weeks after treatment. Group-by-time interactions were significant for ASES ($P=0.003$), VAS ($P<0.001$), SSV ($P=0.03$), and internal rotation ($P=0.007$). Post hoc tests for between-group comparisons revealed a significant improvement in the IA ($P<0.001$) and IA+SA ($P<0.001$) groups as compared to the SA group. The IA+SA group demonstrated significant improvement in internal rotation as compared to the IA group ($P=0.046$).
Conclusions
The efficacy of steroid injection into the subacromial space in idiopathic FS was inferior to intra-articular injection up to 12 weeks; however, combination injections had an additive effect on increasing the internal rotation angle. These results indicate that although the glenohumeral joint is a major site in the pathogenesis of idiopathic FS, the subacromial space may be a contributing site.