Classic Papers in Upper Limb Surgery: Introduction

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Recent years have seen an evolution in our understanding, description and grading of shoulder conditions and an expansion in the development of open and arthroscopic surgical techniques aimed at addressing these. In this chapter, nine classic articles reporting on shoulder biomechanics, shoulder conditions, surgical techniques and classification systems are presented. They are all highly clinically relevant for the practising shoulder surgeon and also for the shoulder researcher.

The first two articles by Neer, [1, 2] one of the fathers of shoulder surgery, describe the syndrome of sub-acromial impingement, its pathogenesis, and staging, as well as the procedure of open acromioplasty for its treatment. These articles have formed the basis for developing our further understanding of external sub-acromial impingement syndrome. The impingement sign and test, which are also described in these articles, remain valuable tools in the clinical diagnosis of sub-acromial impingement. Even though arthroscopic decompression surgical techniques have expanded in recent years, the principles that these techniques utilise follow Neer's original description of open acromioplasty.

The next three articles look at shoulder instability, a commonly encountered shoulder condition. Turkel et al. [3], in a cadaveric study, examine the various passive stabilisers preventing anterior humeral head sub-luxation/dislocation, and emphasise the importance of the inferior gleno-humeral ligament in this role. Recognition of the relative contribution of the various anterior shoulder stabilisers forms the basis for arthroscopic and open anterior stabilisation surgical techniques. Such techniques often aim to restore the integrity and tension of the inferior gleno-humeral ligament. Rowe et al. [4] report the long term results of open Bankart repair for the treatment of recurrent anterior instability, describing the principles of the surgical technique. The Instability scoring system developed by Rowe et al. [4] remains a useful scoring system for the unstable shoulder. In the third article, Neer [5] describes the condition of inferior/multidirectional instability and the surgical procedure of inferior capsular shift used for its treatment. Neer [5] provides guidelines with regards to the diagnosis and treatment of this challenging condition, which are still highly relevant today.

The final four articles examine various aspects of shoulder surgery. The combined subjective/objective shoulder scoring system of Constant and Murley [6] is one of the most commonly used in the shoulder literature and also in routine clinical practice. It remains a valuable tool, as it has a substantial objective component to its assessment of shoulder function. Similarly the Neer classification system [7] of proximal humeral fractures has stood the test of time, being widely used in both clinical practice, for describing these fractures and guiding their treatment, and also in research studies. The Neer et al. report of total shoulder arthroplasty [8] remains one of the pivotal articles demonstrating the potential success of this procedure and hence aiding in its adoption in routine clinical practise. The surgical principles of total shoulder arthroplasty described by Neer et al. [8] are directly relevant to the shoulder arthroplasty surgeon and have influenced the design and development of shoulder replacement prostheses. Finally Poppen and Walker [9] in their article, present the biomechanics of shoulder gleno-humeral and scapulo-thoracic motion in normal and pathological shoulders. Such knowledge is essential in our clinical understanding and evaluation of the shoulder.

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References

1. Neer II CS. Anterior acromioplasty for the chronic impingement syndrome in the shoulder. A preliminary report. J Bone Joint Surg Am. 1972;54(1):41–50.

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2. Neer II CS. Impingement lesions. Clinical orthopaedics and related. Research. 1983;173:70–7.
3. Turkel SJ, Panio MW, Marshall JL, Girgis FG. Stabilizing mechanisms preventing anterior dislocation of the glenohumeral joint. J Bone Joint Surg Am. 1981;63:1208–17.
4. Rowe CR, Patel D, Southmayd MD. The Bankart procedure: a long-term end-result study. J Bone Joint Surg Am. 1978;60:1–16.
5. Neer II CS. Inferior capsular shift for involuntary inferior and multidirectional instability of the shoulder. J Bone Joint Surg Am. 1980;62:897–908.
6. Constant CR, Murley AHG. A clinical method for functional assessment of the shoulder. Clin Orthop. 1987;214:160–4.
7. Neer II CS. Displaced proximal humerus fractures. Part I. Classification and evaluation. J Bone Joint Surg Am. 1970;52:1077–89.
8. Neer II CS, Watson KC, Stanton FJ. Recent experience in total shoulder replacement. J Bone Joint Surg Am. 1982;64:319–37.
9. Poppen NK, Walker PS. Normal and abnormal motion of the shoulder. J Bone Joint Surg Am. 1976;58:195–201.