Summary and Conclusion

The shoulder is a ball and socket joint that allows the arm to be placed in an incredibly wide range of positions during every day activities. The ball is formed by the head of the humerus (arm bone), and the socket is formed by the scapula (shoulder blade). The socket is also referred to as the glenoid. The surfaces of the ball and socket are formed by cartilage, a tissue that allows joints to glide in a smooth and frictionless way **(Powell et al,1999)**.

The glenohumeral joint is the major articulation of the shoulder complex. It is multiaxial synovial joint of the ball and socket variety formed by articulation between humeral head and the glenoid fossa of the scapula.

The shoulder complex has the greatest mobility of all joints of the body. The shoulder girdle described as having five articulations:the glenohumeral (GH),acromioclavicular (AC), sternoclavicular (SC), scapulothoracic (ST) and subdeltoid joints. The scapulothoracic and subdeltoid articulations are false joints with two musculotendinous surfaces moving against each other **(Jobe et al ,1998)**.

The mechanics of the shoulder joint are more complex in comparison to any other joint of the body .This help the shoulder to do a number of unusual functional demands. The range of motion is greater than that of any other joint of the body .This range of motion is needed for the hand as it is the major executive organ in the body **(Terry ,2000).**

Arthritic and degenerative disorders of glenohumeral joint represent a major cause of joint related morbidity, similarly complex fractures of the proximal humerus represent a special problem since accurate reduction and fixation are always difficult to maintain (**Edwards ,2001).**

The purpose of shoulder arthroplasty is to restore comfort and function to glenohumeral joint. Four basic mechanical characteristics are essential: motion, stability, strength and smoothness all can be restored by shoulder arthroplasty. The assessment of a patient's general health and quality of life are important in understanding the outcome of any medical or surgical treatment.

Shoulder arthroplasty is now one of the rapidly growing orthopaedic reconstructive procedures giving good results.

The role of prosthetic replacement in the shoulder has increased as the understanding of the shoulder anatomy and reconstruction has improved. The present policy is to use a humeral head prosthesis for fresh fractures, degenerative arthritis in which the glenoid has been spared and for the more severe cuff tear deficits where satisfactory cuff function is not anticipated **(Smith et al, 1998).**

In an effort to decrease pain and increase functional use of the entire upper extremity, humeral head replacement alone may be inadequate in treating the many problems associated with glenohumeral arthritis. Total shoulder replacements are recommended for advanced glenohumeral arthritis where the rotator cuff can be reconstructed and bone deficits restored **(Gartsman et al, 2000)**.

Excellent results regarding pain relief, range of motion and functional improvement have been reported in over 90% of cases for both hemiarthroplasty and total joint arthroplasty with rate of complications is lower than that of any other major joint reconstruction.

There are different types of shoulder arthroplasty includes:

1) Hemiarthroplasty

2) Total joint replacement,which include

a-Unconstrained

b-Semiconstrained

c-Constrained

3) Bipolar shoulder arthroplasty

4) Resurfacing shoulder arthroplasty

5)Reverse total shoulder arthroplast

It is essential that the patient receives proper rehabilitation following total shoulder arthroplasty. The rehabilitation program itself needs to be a well defined, logical sequence that respects the tissue healing, joint mobility and muscle strength. The rehabilitation process is an individual program and the protocol described is suggested as a guide for the therapist **(Azar and Wright,1998).**

The complications after shoulder reconstruction is less than reported for other joints. The complications after shoulder arthroplasty either occur intraoperative, immediately postoperative or late postoperatively.

The intraoperative and early postoperative complications include:

(1) Intraoperative fractures.

(2) Nerve Injury.

(3) Glenohumeral instability.

(4) Rotator cuff tears.

(5) Deltoid injury.

(6) Infection **(Brems 2002).**

The late postoperative complications include :-

(1) Implant loosening.

(2) Infections.

(3) Postoperative fractures.

(4) Heterotopic bone formation-

(5) Inadequate range of motion**(Brems 2002)**.

Postoperative goals include pain relief, enhancement of motion, strength and stability. To minimize complications and maximize results, care should be taken about patient selection, understanding shoulder anatomy , biomechanics , reconstructive techniques and postoperative rehabilitation.

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