Total Shoulder Arthroplasty

Total shoulder arthroplasty is usually recommended in older patients at least over the age of forty. The concern is loosening of the glenoid component in the future as compared to the humeral component.

Patient Profile/History

The patient is a 68 year old male who presents with severe pain and decreased range of motion to the left shoulder. He notes an approximate five year history of increasing pain and decreasing motion. This has significantly affected his ability to help take care of himself due to the pain and decreased range of motion to his shoulder. He comes in to discuss a possible total shoulder arthroplasty. Clinical examination showed no atrophy of the shoulder glenoid musculature. Active flexion was limited to approximately 70 degrees of flexion with 20 degrees of external rotation and 40 degrees internal rotation with severe crepitus and pain.

Surgical Treatment

A standard deltopectoral approach was made. Evaluation of the glenohumeral joint showed marked deformity and flattening of both the glenoid and the humerus. The patient elected to proceed with total shoulder arthroplasty. Utilizing the low profile Integra glenoid retractors, an Integra pegged glenoid component was cemented in place. These low profile retractors tremendously improve exposure to the glenoid. An Integra Titan™ Total Shoulder System press-fit humeral body and stem were placed in the humerus with good stability.

Postoperatively, the patient underwent a physical therapy program and achieved excellent range of motion. He was quite pleased with the procedure. His final range of motion at last follow-up was 150 degrees of flexion, 80 degrees of internal rotation, and 80 degrees of external rotation. His strength was graded at four plus over five in abduction and forward flexion.
Pre-Op and Post-Op Radiograph/MRI/CT Images and Surgical Pictures

Figure 1 – Anterior/posterior radiograph demonstrating advanced arthritis of the glenohumeral joint. Note the bone on bone contact, with a large inferior humeral spur both on the glenoid and humerus.

Figure 2 – Axillary view showed advanced bone on bone arthritic changes with large ossified formation particularly on the glenoid posteriorly. There is more bony deformity of the proximal humerus posteriorly as well.

Figure 3 – Anterior/posterior radiograph postoperatively showing the Titan Total Shoulder System humeral component. There is good humeral head positioning in relation to both the greater tuberosity and the glenoid component.

Figure 4 – Fluoroscopic radiograph showing excellent positioning of the prosthesis in relation to the glenoid. It is well centered.

Physician Conclusion

Press-fit arthroplasty has a significant advantage over previously cemented prosthesis. It significantly reduces operative time and simplifies future revision procedures. Sometimes, it is difficult to identify how well the rotator cuff is functioning in patients with severe arthritis of the shoulder. If the patient ever requires a conversion to a reverse shoulder arthroplasty, utilizing the Integra® Titan™ Modular Shoulder System will significantly simplify the procedure by leaving the well-fixed humeral stem component, removing the body of the total prosthesis, and replacement with a reverse body without the need for cement.

This technique has been developed with the help of William B. Geissler, MD

As the manufacturer of this device, Integra does not practice medicine and does not recommend this or any other surgical technique for use on a specific patient. The surgeon who performs any implant procedure is responsible for determining and using the appropriate techniques for implanting the device in each patient.

Availability of these products might vary from a given country or region to another, as a result of specific local regulatory approval or clearance requirements for sale in such country or region.

- Always refer to the appropriate instructions for use for complete clinical instructions.
- Non contractual document. The manufacturer reserves the right, without prior notice, to modify the products in order to improve their quality.
- Warning: Applicable laws restrict these products to sale by or on the order of a physician.

For more information or to place an order, please contact:

United States, Canada, Asia, Pacific, Latin America
USA 800-654-2873 • 888-980-7742 fax
International +1 609-936-5400 • +1 609-750-4259 fax
integralife.com/contact

Manufacturer:
Ascension Orthopedics, Inc.
8700 Cameron Road, Suite 100
Austin, Texas 78754 • USA