Bibliography


References


2. Many prosthesis designs have been developed during the last decades, but all of them disappeared due to early loosening, mainly of the glenoid component. For more than 10 years, a semiconstrained prosthesis (Grammont Design) with a new design philosophy and improved biomechanical properties has been used in clinical practice.

3. “...results of treatment of arthritic shoulders with rotator cuff deficiency with this prosthesis have been encouraging with regard to pain relief and improvement of function.”

4. “...reverse design prosthesis...”

5. “...reverse design prosthesis...”

6. “...reverse design prosthesis...”

7. “...reverse design prosthesis...”


**Aequalis® Reversed Shoulder Prosthesis**

**Built on 12 Years of Clinical Success**

Since the early 1990’s, specific principals for Reversed Shoulder Arthroplasty have been used by European shoulder surgeons with unmatched clinical success. As a result, a growing number of surgeons in the United States have begun to utilize a unique prosthesis incorporating these specific principals and the associated surgical techniques that go with it.

The Aequalis® Reversed Shoulder Prosthesis was designed based on two biomechanical principles envisioned by Paul Grammont, M.D. First, a medialized center of rotation located inside the glenoid bone surface and second, a 155 degree angle of inclination. Combined, they increase the deltoid lever arm by the associated surgical techniques. The Aequalis® has been the subject of dozens of research papers and articles in Europe and the United States.

**Indications for the Aequalis® Reversed Shoulder**

The Aequalis® Reversed Shoulder Prosthesis is indicated for patients with a functional deltoid muscle, as a total shoulder replacement for the relief of pain and significant disability following arthropathy associated with massive irreparable rotator cuff tear. This device is also indicated for the prosthetic revisions with massive and irreparable rotator cuff tear.

As the acknowledged design leader in shoulder arthroplasty, Tornier Inc. understands that advancements in surgical science are a gradual process based on research and results over time. Years of clinical success in the treatment of massive irreparable rotator cuff tears, have made the Aequalis® Reversed design a time tested standard. But even standards are subject to improvement and that is why Tornier is committed to continuous research for new technology options.

**Advancements in Technology**

The ‘reversed’ technology is the result of over twelve years of clinical trials and rigorously documented research indicating the better biomechanical product and the associated surgical techniques. The Aequalis® has been the subject of dozens of research papers and articles in Europe and the United States.

**Intra Operative Flexibility**

Additional components offer surgeons intraoperative flexibility to meet the varying needs and challenges of individual cases.

"Dislocation rates may be decreased by the availability of multiple length options for the humeral polyethylene insert and with use of the larger component."

—Hatzidakis A, 2005

**Lateralized Spacers**

Optional spacers allow for an increase in lateralization and height of the prosthesis, especially in significant metaphyseal bone defects.

**Metaphysis and Stems**

Both 36 mm and 42 mm diameter metaphysis options are an anti-decoaptation design with a polyethylene plug for secure fixation. Additionally, the fluted stems are available in varying lengths (100 mm to 210 mm) and are designed for maximum flexibility and stability.

**Aequalis® Reversed Hemi-Adaptor**

In the event of an intraoperative or postoperative glenoid fracture, the surgeon has the ability to easily convert the humeral component of the Aequalis® Reversed into a hemi-prosthesis.

**"The baseplate should be very well fixed to bone. This requires at least 3 of 4 screws having good purchase."**

—Hatzidakis A, Norris T, Boileau P, 2005

**“...prosthetic designs in which (1) the glenohumeral centre of rotation is medialized, (2) the deltoid muscle is elongated and (3) the humeral shaft is lateralized, have a favorable slope of their muscle angle-force curves”.**

—De Wilde LF et al., 2004

**Glennoid Sphere**

The glenoid sphere comes in diameters of 36 mm and 42 mm with a morse taper lock and a recessed set screw.

The recessed locking screw serves two functions for the glenoid component. First, it provides a belt and suspenders; a second mode of secure fixation of the glenoid sphere onto the baseplate. It also lets the surgeon know, with confidence, that the glenosphere is properly seated; since the set screw will not engage if the glenosphere is not fully seated and the morse taper locked.

**Lateralized Polyethylene Insert**

- 2 diameters: 36 mm and 42 mm
- 3 thicknesses: 6 mm, 9 mm, and 12 mm
- Anti-rotational design

Laboratory tested, the circumferential barbed peg to firmly locks the polyethylene insert into the threads of the metal metaphyseal hemispherical head compression screws. This unique design provides the surgeon increased options for the standard cuff tear arthroplasty patient to the more complicated rheumatoid or revision case. The G2 Baseplate is a 29 mm diameter press-fit design and a 15 mm central peg for primary fixation and stability

**Metaphysis and Stems**

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