Profemur® Xm

Cemented Stem
Force-closed fixation Design

Surface
Highly polished, forged CoCr stem reduces friction at the cement-implant interface, reducing the potential for wear

Rounded Edges
Promotes radial compressive loading

Sizes
Available in sizes 0-4

Dual Taper Geometry
Promotes cement engagement and provides rotational stability

Distal Centralizers
With or without wings

Allow distal stem engagement within the cement mantle

MicroPort Orthopedics
Full Function, Faster™

Profemur® Xm

Design Features

Taper-Slip
Stem acts as an extruder of cement into and onto the endosteal bone surface.[1]
Stem distally moves within the cement mantle, without disruption of the cement-bone interface[2,4].
Accommodates cement creep and stress relaxation in the cement mantle.[6]

Dual Taper geometry
Promotes cement engagement and provides rotational stability.
"Force Closed Fixation": Transmission of load from the stem's proximal part onto the femur[5].

Highly polished, forged CoCr surface
Complements the taper engagement by reducing abrasion at the stem/cement interface.[3]

Rounded Edges
Promotes radial compressive loading.

2 types of hollow-pocket centralizers – with/without wings
Allow distal stem engagement within the cement mantle and to prevent end-bearing.

Modular Neck Technology
Avoids compromising in stem positioning within the cement mantle[9].

History

In 1969, Ling and Lee introduced the collarless polished double tapered Exeter stem. The original polished Exeter stem was the first of what is now known as a force-closed design and has performed well over the long-term[1,7].
The results were excellent, although there was subsidence at the cement-stem interface. However, it was later recognized that a relatively small amount of subsidence of 1 mm or 2 mm was not detrimental to long-term fixation[6].

Cemented femoral implants have been developed to function either as loaded-tapers (force-closed fixation) or composite-beams (shape closed fixation). Although in vivo both concepts of stem fixation proved to be effective, they cannot work together. It is important to understand on which principle a particular stem relies[8].

The Profemur® Xm, launched in 2006, also a forced-closed type of stem, was based on the Exeter Philosophy and has been developed in cooperation with the Oxford study group. This stem transmits stress to the surrounding cement mantle and bone in a similar manner to the Exeter stem[9]. The Profemur® Xm could be expected to have a similar clinical performance to the Exeter, while providing the additional advantage of modularity[9].

References

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Individual results and activity levels after surgery vary and depend on many factors including age, weight and prior activity level. There are risks and recovery times associated with surgery and there are certain individuals who should not undergo surgery.