Expertise in Short Hip Arthroplasty
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The recent trend in hip arthroplasty is a move toward shorter femoral stems. Cementless stems coated with hydroxyapatite, porous titanium, or calcium phosphate salt are trendy and allow for bone ingrowth. Even with the advent of these shorter stems, however, revision surgery remains difficult. If a femoral stem must be removed, conventional length primary stems can be used in most cases. Metal-on-metal surface replacement was thought to be the answer, but numerous attempts failed to make this procedure successful.

For this reason, a few researchers looked into femoral neck–preserving technology (not the same as a short femoral stem) thereby using short porous coated cementless stems that are implanted with femoral neck cortical fixation. Some of these shorter femoral stems have a good track record over a mid-term period from 5 to 10 years.

The philosophy and surgical technique of the procedure using the femoral neck–preserving stem is quite different and mandates the surgeons willing to implant these short stems to undergo meticulous training. If correctly implanted, the prosthesis follows the curvature of the femur neck and not the shaft (Figure). Intraoperative radiographs should always include an anteroposterior and lateral to verify correct placement. The learning curve can be steep, but many mistakes can be prevented by surgeons undergoing training and not trying it on their own.

It is indeed in the patient’s interest, as well as in the interest of the technique, the concept, the surgeon’s reputation, and the company’s reputation, to implant these femoral neck stems properly. The last phenomenon the industry wants is an excellent concept and a hip prosthesis gaining a bad reputation and even falling by the wayside due to a few inadequately trained surgeons’ bad results.

This supplement “Expertise in Short Hip Arthroplasty” includes an overview of today’s available short hip stem devices and the concept, results, and experiences of a particular short hip stem design. The contributing authors have dedicated experiences with short hip total hip arthroplasty. As indications for shorter hip stems may not really differ from those for standard length conventional femoral cementless stems in young and middle aged patients, the criteria for contraindications and the avoidance of complications must be understood and followed.

As an example, with regard to the Metha Short Hip Stem (B. Braun Aesculap; Tuttingen, Germany), the following apply:

- Physiological bone age older than 65 years
- A large and wide femoral neck is difficult.
- A high varus and too short femoral neck can mislead leg length.
- A femoral neck at least 2 mm proximal and proud of the fossa trochanterica is essential.

This procedure holds big promise and is worth the effort to implant with all of the above criteria in place.

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