Orthopedics & Rheumatology-2013
2nd International Conference and Exhibition on
Orthopedics & Rheumatology
August 19-21, 2013 Embassy Suites Las Vegas, USA

Cementless Thr in dysplastic hip joint

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Abstract

Aim: The purpose of the study was to solve the problem of acetabular dysplasia, with cementless total hip endoprosthesis using smaller acetabular cup, to fit the size of dysplastic acetabulum, without using any additional bone transplantation for superstructure of the acetabulum.

Introduction: Untreated developmental dysplasia of the hip (DDH) join is huge problem to solve in elderly patients. As we already know DDH can be expressed in several forms according to stage. This means that in young and elderly patients we can find different consequences, from slight to moderate supraacetabular dysplasia, combined with anterior dysplasia, and valgus and anteversion of proximal femur, up to high hip luxation.

In efforts to find better way to solve the slight and moderate supraacetabular dysplasia, in some cases combined with high luxation, we have tried to use smaller acetabular cup that will fit the dysplastic acetabulum, combined with higher hip center, dysplastic polyethylene, and also with longer femoral neck to avoid leg discrepancy and weakness of the gluteal musculature.

Material and Methods: From 01.1999 to 01.2002 we performed this type of operation in 48 patients with dysplastic coxarthrosis of the hip, 36 female and 12 male, aged from 32 to 63 years. In all of them we performed application of smaller acetabular cementless cup type Zimmer or Biomet, after riming the acetabulum near to the internal lamina of the iliac bone. In all cases we achieved good primary fixation of the acetabulum. We didn't use any supraacetabular reconstruction in any of the cases. In some cases were the dysplasia was very expressive we have leaved for about 1/3 of the acetabular cup uncovered. In postoperative period we adviced the patients to load the operated leg over two crutches without full bearing, for about 6 weeks. After that, according to clinical and X-ray findings we advice bearing with one crutch, and after 4 months walking without crutches.

Results: The preliminary results of our study are satisfactory. We didn't have any early postoperative complications. The incorporation of bone in the acetabular cups measured with X-ray and with scintigraphy with Tc99m was good. In some cases were we leave part of the cup uncovered there was formation of new bone supraacetabulary after 6 months.

Conclusion: Using this type of acetabular reconstruction we can avoid bone superstructure of acetabulum and problems that may occur if the demodulation of bone transplant failure. Also in that way we avoid irregular biomechanical bending in the supraacetabular region.