**Introduction:** Total hip replacement in patients with developmental dysplasia presents a challenge to the orthopedic surgeon. There is considerable variation in the anatomy with acetabular deficiency, small anteroposterior distance, abnormal femoral anatomy, soft-tissue contractures and muscle weakness[1, 2, 3, 4, 5]. The average of age of patients is low and the demands placed on an arthroplasty are often high[6]. The survival rates of total hip replacement in this group of patients vary widely from as low as 69% to as successful as 100% after follow-up for between 10 and 20 years[7, 8, 6, 9, 10, 11]. Resurfacing arthroplasty remains an attractive option for this group of patients as it preserves femoral bone stock allowing conversion to total hip replacement should failure occur[3]. Metal-on-metal hip resurfacing is increasing in popularity in the treatment of this condition[19]. Recently a 96% survival rate at 5 years has been reported where 70% of the patients had a diagnosis of developmental dysplasia[19]. However, a separate study has reported disappointing mid-term results with 5 femoral failures in 59 hips at an average of 6 years[3]. The aim of this study was to provide the mid-term results of metal-on-metal hip resurfacing in a group of patients with developmental dysplasia.

**Materials and Methods:** The study period was from August 1997 to August 2004. A consecutive series of 103 hips (94 patients) with a diagnosis of osteoarthritis secondary to developmental dysplasia of the hip who were treated during this period with a Birmingham Hip resurfacing were identified. Demographic, clinical, hip scores and radiographic data were collected. The Crowe and the Hartofilakidis grading systems for dysplasia were used. The mean age at the time of surgery was 42 (range, 14 to 65) years. Twenty (19%) procedures were performed in male patients and 83 (81%) in female patients.

**Results:** Survival
There were 5 (4.8%) revisions during follow-up. Four of the revisions were for failure of the acetabular component and the dysplasia cup was used in three of these cases. The 5-year survival rate was 95.5% (95% CI 88.1% - 99.2% n = 27). The Kaplan-Meier survival curve is shown in Figure 1.

**Discussion:** The perceived advantages of a hip resurfacing are preservation of femoral bone stock, ease of conversion to total hip replacement should failure occur and improved level of post-operative function when compared with total hip replacement. For these advantages to be seen the revision rate of hip resurfacing should be at least comparable to that of total hip replacement. Hip resurfacing for osteoarthritis has been demonstrated to have excellent medium-term results but no long term follow-up of contemporary hip resurfacing procedures. Hip resurfacing for developmental dysplasia in this series has a 5-year survival rate of 95.5% with excellent functional outcome.

**References:**

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