

## **Arthroplasty for hip fracture in Uruguay. Earlier surgery and better general care rather than new devices**

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### **Background:**

14.1% of Uruguay population is older than 65 years. Hip fracture risk increase with age and consequences may be devastating. Arthroplasty for hip fracture is funded by the National Resources Fund (NRF) for all citizens. Registry was developed and performance indicators evaluated. Delay between fracture and surgery exists and affects functional results and mortality. Surgery is provided with a cemented prosthesis produced by regional manufacturer at a low cost. Progressive pressure emerges for incorporation of new and high cost prosthesis.

### **Objectives:**

Analyze medium and long term mortality and risk factors for, and incidence of revision surgery, to optimize resources allocation.

### **Methods:**

Cohort of years 2003-2006 of hip fracture arthroplasty was analyzed and logistic regression model for one year-mortality was developed. Model performance analysis and competing risk for time to revision and mortality were applied to 2008 cohort.

### **Results:**

3146 arthroplasties were done between 2003 and 2006, risk factors for mortality were age (OR=1.05 per year above 74), male (OR=1.76), renal failure (OR=1.53), Parkinson (OR=1.59), diabetes (OR=1.58), disseminate cancer (OR=8.12), respiratory disease (OR=1.42), dementia (1.73), partial arthroplasty (OR=2.49) and days until surgery (OR=1.014 per day). The median of the time between fracture and surgery was 6 days (IQ range 5-12). In 2008, 870 arthroplasties was done (79.5 years old, 17% male). Performance of the model in 2008 cohort was good for one year (c-index:0.67,0.62-0.73) and for 5 years mortality (c-index:0.69,0.65-0.72). At one, three and five years, incidence of revision request was 0.57%, 0.92% and 1.26%, and mortality was 13.1%, 29.3% and 46%, respectively.

### **Conclusions:**

Mortality at follow-up was high and factors susceptible to improve were identified (care of diabetes, dementia, Parkinson, chronic respiratory disease and renal failure). Incidence of revision was very low at five years. Invest in earlier surgery and in improve medical care will be more cost-effective than to incorporate new devices for arthroplasty.