

Epidemiology of proximal humerus fractures in Sweden

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Introduction: The treatment of proximal humerus fractures is controversial as recent reports have shown an increasing surgical activity although the literature favours conservative treatment especially in the older age groups. Valid epidemiological population-based data including both inpatient and outpatient visits has so far been lacking. The Swedish National Inpatient Register provides a possibility to include patient data such as diagnoses, surgical procedures, sex and age.

Patients and Methods: We conducted a nationwide registry-based study including all adult (>18 years of age) inpatient and outpatient hospital visits due to proximal humeral fractures in Sweden between 2001 and 2012 to calculate the population-based incidence of proximal humeral fractures in Sweden. An additional analysis was made between 1997 and 2012 to assess the number and trends of different surgical treatments.

Results: We identified a total of 98,881 patients (females n=72,150; 73 %) with proximal humerus fractures between 2001 and 2012. In 2001, the sex-specific person-based incidence of proximal humerus fractures was 134 per 100,000 person-years in women and 49 in men. In 2012, the corresponding figures were 176 in women and 68 in men, with an increase of 31% in women and 39% in men. A total of 16,843 surgical procedures were conducted between 1997 and 2012. Open reduction and plate fixation was the most common procedure (n=4,681) followed by endoprosthesis (n=3,867) and intramedullary nailing (n=3,130). The proportion of surgically treated patients increased from 12% in 2001 to 15% in 2012 in women and from 14% in 2001 to 15% in 2012 in men. The proportion of plate fixation and arthroplasty increased while the proportion of other surgical techniques decreased.

Conclusion: A continuous increase in the incidence of proximal humerus fractures was seen. Plate fixation and arthroplasty were the procedure types to gain popularity. To our knowledge this is the only nationwide epidemiological study reporting on national population-based incidence of proximal humerus fractures that includes both inpatient and outpatient cases. This allowed us to estimate the nationwide operative and conservative treatment percentages.