

Rates Of Arthroscopic Knee Surgery Are Declining In England – Results From A Review Of 2 Million Hospital Episodes

Orthopaedics / Knee & Lower Leg / Epidemiology, Prevention & Diagnosis

Simon Abram, Andrew Judge, David Beard, Andrew Price

University of Oxford, Oxford, United Kingdom

Keywords: Arthroscopy, Knee, Intervention Rates, Arthroscopic Surgery

Background

Previous reports have suggested that the rate of arthroscopic knee surgery being performed in England was increasing until at least 2012. Since then, clinical trial evidence has been published challenging the effectiveness of arthroscopic knee surgery for the management of conditions such as degenerative knee disease.

Objectives

The impact of the evidence on clinical practice is unknown, and the purpose of this study was to determine the true rate of arthroscopic knee surgery performed in England from 1997 to 2016. The majority of recent trial evidence has been applicable to patients with a meniscal tear and degenerative knee disease, and therefore the rate of arthroscopic partial meniscectomy (APM) in patients over the age of 60 is highlighted.

Study Design & Methods

National hospital episode statistic (HES) data on all knee arthroscopy procedures performed in adult patients in England between January 1997 and December 2016 was acquired from NHS Digital, UK. The number of unique arthroscopic knee procedures performed per year was determined and Office for National Statistics (ONS) population data was used to calculate rates of surgery by age group and geographic region.

Results

Through 1997-2016, 2,063,650 knee arthroscopies were performed in England (1,300,265 patients). The mean age at the time of surgery was 47 (SD 16) and 62% of patients were male. Nationally, the rate of knee arthroscopy increased from a low of 169/100,000 population in 1998 to peak at mean 242/100,000 from 2008-2010 before declining steadily to 178/100,000 in 2016. The rate of APM increased steadily from a low of 58/100,000 in 1998 to a peak at mean 146/100,000 through 2010-2014, before declining to 122/100,000 in 2016.

In the over 60 age group, 463,071 knee arthroscopies were performed and the rate increased from a low of 157/100,000 in 1998 to a peak of mean 281/100,000 in 2008-2010 before declining gradually to 170/100,000 in 2016. The rate of APM increased from a low of 47/100,000 in 1998 to a peak at mean 184/100,000 through 2010-2014, before declining to 138/100,000 in 2016 although considerable regional variation was noted.

Conclusions

National data suggests that rates of arthroscopic knee surgery have declined considerably from previous peak levels, indicating a change in practice in response to published trial evidence. Nevertheless, considerable regional variation persists and rates are higher in England than those reported in some other countries. The 'appropriate' rate of arthroscopic

knee surgery for the population is, however, unknown, and extensive further investigation is required to determine this important information.