Sick Leave After Surgery for Thumb Carpometacarpal Osteoarthritis: A Population-Based Study

Jennifer Moriatis Wolf, MD,*† Isam Atroshi, MD, PhD,‡§ Caddie Zhou, MS,§ Jon Karlsson, MD, PhD,∥ Martin Englund, MD, PhD¶

Purpose Patients undergoing surgery for thumb carpometacarpal (CMC1) osteoarthritis often require sick leave owing to postoperative immobilization, pain, and decreased function. Our goal was to evaluate the amount of sick leave after surgery for 2 common CMC1 arthroplasty procedures.

Methods Using registry data from the Skåne region of southern Sweden, cross-linked with employment data showing person-specific sick leave, 2 cohorts of CMC1 surgical patients, between ages 40 and 59 years, were examined. These comprised all persons undergoing soft tissue arthroplasty and prosthetic implant arthroplasty from 2004 to 2012 identified using International Classification of Diseases, 10th Revision, and surgical codes. These subjects were analyzed against an age- and sex-matched reference population cohort.

Results Surgical cohorts of 326 and 169 subjects undergoing soft tissue and prosthetic CMC1 arthroplasty, respectively, were compared with reference populations of 1,110 and 574 persons. Surgical subjects had a pronounced increase in sick leave in the first 2 months after surgery, followed by diminishing days of leave over time. Mean sick leave time after soft tissue arthroplasty was 202 days in women and 170 days in men. Following prosthetic arthroplasty, mean sick leave was 177 days in women and 188 in men. When we excluded those with documented sick leave in the month before surgery (owing to preoperative CMC1 disability or other medical issues), the mean postoperative sick leave decreased to 137 days in women and 125 days in men after soft tissue arthroplasty compared with 109 and 94 days in women and men after prosthetic implant arthroplasty, and this difference was significant. There were no differences in the length of sick leave between sexes and no correlation with age.

Conclusions Soft tissue arthroplasty and implant arthroplasty for patients with CMC1 osteoarthritis are both associated with substantial sick leave time, indicating the impact of surgery on return to work. There were no differences in sick leave by sex or age. (J Hand Surg Am. 2017;—(—):—.—. Copyright © 2017 by the American Society for Surgery of the Hand. All rights reserved.)

Type of study/level of evidence Prognostic II.

Key words Disability, sick leave, thumb CMC, trapeziometacarpal.
HIGH LOADING FORCES WITH PINCH and grip of the hand are postulated to be contributory to the development of thumb carpometacarpal joint (CMC1) osteoarthritis (OA). Stress on the stabilizing ligaments as well as direct wear load at the cartilage surfaces of the trapezium and first metacarpal have both been implicated in the etiology of this common problem.

In a large radiographic cohort study of nearly 4,000 subjects with follow-up clinical examination, Dahaghin et al noted that radiographic CMC1 OA was associated most strongly with hand pain, when evaluating each joint with OA separately. Data from the Framingham study indicated that patients with symptomatic hand OA, including CMC1 OA, showed greater difficulty in writing and handling small objects.

Nonsurgical treatment to address pain and functional disability caused by symptomatic CMC1 OA includes splinting, physiotherapy, and corticosteroid injections. When these fail, surgical treatment is recommended. Studies have shown that trapeziectomy, with or without ligament reconstruction or stabilization, is the most commonly performed procedure. After surgery, recovery includes immobilization, therapy, and temporary activity restrictions including lifting, fine manipulation, and gripping.

In the perioperative management of this functionally disabling problem, time away from work or inability to work has been documented to a very limited extent. Young and Rayan noted that 25 of 28 (89%) patients who underwent trapeziectomy with ligament reconstruction and tendon interposition returned to their previous occupation, but they did not document the time away from work (absenteeism). Similarly, Kriegs-Au et al noted that 6 of 10 patients who underwent trapeziectomy and ligament reconstruction without tendon interposition returned to their previous occupation, compared with 9 of 11 who underwent treatment with ligament reconstruction and tendon interposition. However, neither of these studies noted the timeline on which patients returned to their occupation.

The aim of this study was to evaluate the amount of sick leave associated with surgery for CMC1 OA, using Swedish registry surgical records, stratified by type of procedure, cross-linked with individual-level sick leave data. We hypothesized that both soft tissue and prosthetic arthroplasty would result in an extended period of disability after surgery, comprising months away from work, with no differences between procedures.

METHODS

Thumb carpometacarpal joint surgery cohorts

Data from the Skåne Healthcare Register (SHR), in which all patient visits to health care facilities in the Skåne region (1.3 million inhabitants) in southern Sweden are registered, were analyzed for this study. The SHR covers all public health care providers (outpatient and inpatient at primary, secondary, and tertiary levels). From the SHR, 2 different patient cohorts were identified (a soft tissue arthroplasty cohort and a prosthetic implant cohort) fulfilling the following inclusion criteria between 2004 and 2012: (1) an International Classification of Diseases, 10th Revision, diagnosis code of M18 (consistent with the specific diagnosis of CMC1 OA); (2) an operative code of NDG12 or NDB (indicating CMC1 soft tissue or implant arthroplasty, respectively, according to the Swedish Classification of Healthcare Interventions) in conjunction with M18 diagnosis code; (3) age between 40 and 59 years (chosen in order to capture the majority of working adults because there is a relatively high rate of early retirement or disability pension among individuals older than 60 years); and (4) resident of the Skåne region a full calendar year prior to the date of surgery. The study further excluded all patients having a record of any disability pension the year before their surgery. Disability pension status is defined as a person who receives compensation for permanent partial or full inability to perform their occupation.

Reference cohorts

Each of the 2 cohorts of surgical patients was compared with a reference cohort, as follows: For each surgical CMC1 OA subject, we randomly selected 4 individuals who presented for physician consultation with any diagnostic code and had the same birth year and sex. Similar to the 2 surgical cohorts, the reference cohorts consisted of residents of the Skåne region who had no record of disability pension the year before the index date of surgery of the subject to whom they were assigned as reference (Table 1).

Swedish Social Insurance Agency data on sick leave

Social insurance in Sweden is administered by the Swedish Social Insurance Agency (SSIA) and covers everyone who lives or works in Sweden. In Sweden, every individual, legally working or registered as unemployed, who cannot work owing to illness or injury, is entitled to sick leave. Compensation for sick leave is administered by the SSIA. For employed individuals, the first 14 days of sick leave are, in
دریافت فوری متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات