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#### Original article

# Hip Arthroplasty Malpractice Claims in the Netherlands: Closed Claim Study 2000-2012

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#### ABSTRACT

*Background:* A total hip arthroplasty (THA) is a successful and reliable operation with few complications. These complications however, do form a potential source for compensation claims. In the Netherlands, there are no studies available concerning filed claims after THA. The aim of this study was to determine the incidence of claims related to THAs in the Netherlands and the reasons to claim, which claims lead to compensation, the costs involved for the insurer, and the demographics of the claimants.

*Methods:* In this observational study, we analyzed all closed claims from 2000 to 2012 from the national largest insurer of medical liability and compared it to data from our national implant registry in the Netherlands. With the intention to contribute to prevention, we have identified the demographics of the claimant, the reasons for filing claims, and the outcome of claims.

*Results:* Overall, 516 claims were expressed in 280 closed claim files after THA. Claims were most often related to sciatic nerve injury (19.6%). Most claimants were women (71.6%) with an average age of 63.1 years. The median cost per compensated claim is  $\in$  5.921.

*Conclusion:* The claimant is more likely to be female and to be younger than the average patient receiving a THA. The incidence of a claim after a THA is 0.14%-0.30%. Nerve damage is the most common reason to file for compensation. The distribution in reasons to claim does not resemble the complication rate in literature after a THA. The outcome of this study can be used to improve patient care, safety, and costs.

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A total hip arthroplasty (THA) is cost-effective, increases quality of life, and has high patient satisfaction [1]. Although this operation is regarded as one of the most successful surgical treatments [2], there are inevitable complications involved, which potentially could lead to malpractice claims. In the United States, the 5 main sources for litigation after a THA are infection, leg length discrepancy, dislocation, nerve damage, and embolic events [3,4]. From a Finish register study, analyzing predisposing factors for claims, it seems that males and elderly who received a cemented hip prosthesis were less likely to file a claim after a THA [5]. A good understanding of claims may increase awareness among surgeons about which mistakes and complications might occur and which of these are more claim sensitive. Previous studies have called attention to the causes of claims in orthopedics in general [6], and the characteristics of the claimant after hip and knee arthroplasty [5]. In the Netherlands, there are no data available on either the complications leading to a claim after a THA or the demographics of the claimant. We have a unique situation, where the most (75%) of the physicians working in public hospitals are insured by a single malpractice insurance company [7,8]. This allows us to make relatively reliable estimates of claim percentages and to give an overview of claim characteristics.

The aim of this study was to evaluate all claims in a 13-year period in the Netherlands, to study the incidence of claims related to the total number of THA, hip resurfacing, and total hip revision surgery procedures, as well as the demographics of the claimants, the details of the claims, and the compensation involved.

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#### **Materials and Methods**

This study is a descriptive observational study of data from MediRisk. MediRisk is the nation's largest medical liability insurance company in the Netherlands, representing 75% of all medical specialists working in public hospitals. A list of all closed claim files concerning hip surgery from 1993 to 2012 was obtained from MediRisk. Claims concerning primary THAs, hip resurfacing arthroplasties, and revision THA were included. Other hip surgery claims were excluded. Claims directed to another health care professional than an orthopedic surgeon were excluded.

In earlier years, closed claims that had been in the archive for over 10 years were destroyed. Consequently, 73% of the closed claim files before the year 2000 were lost to follow-up. Therefore, we have chosen to only analyze the claims from the years 2000-2012. From the remaining 364 claims concerning hip joint implant procedures, 1 file was destroyed, 78 concerned other hip pathology than primary THA and revision THA, and 5 files were untraceable (Supplementary Fig. 1). A total of 280 closed claims were available for analysis. Another 58 claims (17%) from the period 2000-2012 have not been closed yet, but demographic data of the patients filing for litigation were available. All closed claim files were extracted from the archive and retrospectively reviewed. They were anonymously recorded regarding patient, physician, and hospital.

Data extracted from each file were age, gender, date of the operation and date of filing the claim, the presence of interest representative, type of fixation of the arthroplasty, operative approach, reasons to claim, outcome of the claim, total costs associated, and the compensation paid to the claimant.

In many cases, several allegations were expressed by the claimant, when stating the subjective history of events leading to the claim. The principle author has registered up to 4 reasons for each claim, in order of appearance in the original letter in which the complaint was made. As a result, more causes to claim were registered than file numbers.

Potential selection bias has been avoided by analyzing all closed claims in the given period and not by selecting a random sample.

#### Claims Related to National Register

For the years 2010-2012, we have accurate data from the national arthroplasty register system (LROI) in the Netherlands with a coverage ratio of 100% of all Dutch hospitals in 2012 [9,10]. Because these data have only recently become complete, we have illustrated these numbers against the trend projection from the Dutch Bureau of Statistics (Supplementary Fig. 2) [11]. We have extrapolated the data from MediRisk to calculate a claim incidence after THA.

Because the period of accurate data from the LROI (2010-2012) is shorter than the period from which the claims are analyzed (2000-2012), we have not calculated statistical differences between these 2 groups.

#### Results

Of the 280 claims, 218 concerned primary THAs, 32 resurfacing hips, 29 (partial) revision THAs, and in 1 case, the procedure remained unclear from the file. The absolute number of claims after primary or revision THA has steadily increased over the study period until 2006. After this year, the number of claims has been variable (Supplementary Fig. 3). Most claimants are female (71.6%), and the mean age of the claimant during the procedure is 63.1 years (n = 338). Most of the claims concerned uncemented hip procedures and the posterolateral approach (Supplementary Table 1).

Nerve damage (19.6%), communication and informed consent (13.3%), reoperation (11.0%), and leg length discrepancy (8.7%) were

the top 4 reasons to claim in the total of 516 claims expressed by the claimants in 280 cases (Supplementary Fig. 4).

If we extrapolate the data from MediRisk, which involve all closed claims of 75% of all orthopedic surgeons in public hospitals and we compare this to the yearly performed number of THAs [10], a claim is made in 0.14%-0.30% of all THA and revision procedures.

#### Claim Handling

Of all 280 claims, 22.5% led to a payment of compensation (7.9% was accepted and/or acknowledged, 14.6% was settled). The other claims were either denied (68.2%) or dropped and/or withdrawn without a verdict (9.3%), for example, when after filing the claim, the claimant did not respond to the correspondence (Supplementary Fig. 5).

The chances of a claim being compensated were highest when it concerned the usage of inadequate material or a surgical error (Supplementary Table 2).

Of all patients having a third party to look after their interest (eg, lawyer, family, employer) the claim was denied in 58.9% compared to 77.5% when not having a representative. The chance of the claim being accepted is twice as high when having a representative (12.8%) vs not having one (5.8%).

The total procedure and compensation payment costs for the insurance company of all 280 claims from 2000-2012 was  $\in$ 739.351. Of this amount,  $\in$ 484.699 (65.6%) has been paid in compensation to the claimants. In 60% of all cases (n = 168), costs were being made with a median of total costs for all claims  $\in$ 305,58 (103,00-4056,25). In 22.9% (n = 64), compensation was paid to the claimant. The median compensation paid to claimants was  $\in$ 5.921,00 (2.749,93; 12.560,89). The claim compensation between the years 2000-2012 ranged from  $\in$ 89 to  $\in$ 71.013. The lowest compensation was paid for a small deglovement wound after removing drapes and the highest amount for a false passage of the reamers with a necessity to reoperate. There is a peak in the costs in the year 2007 (Supplementary Fig. 6), but the figure only refers to costs associated with closed claims. The costs involved in liability claims will continue to rise in more recent years along with closing ongoing claims.

The total cost of all orthopedic claims with MediRisk in the study period 2000-2012 was  $\in$  22.461.303, making the costs of claims after a primary or revision THA 3.3% of the total claim burden in the orthopedic field.

#### Discussion

In our analysis of closed claims in a 13-year period we have shown, a claim is filed in 0.14%-0.30% yearly of all THAs. The claimant is more likely to be female and to be younger than the average THA patient. Nerve damage is the most common reason to file for litigation after hip arthroplasties. The median cost paid in compensation is  $\in$ 5.921.

#### **Claim Numbers**

Internationally, the number of claims in general has increased absolutely and relatively to the number of treatments. In particular, in the 90s, there has been an increase in claims [12-14]. There has also been a considerable increase in number of claims in orthopedic surgery [14,15], but when comparing this to the increasing number of total hip procedures, a decline is actually seen [16]. The increasing number of claims internationally might be related to the gradual change in culture concerning the attitudes toward medical staff, but also a growing market of legal institutions has been noted [13]. Although a paternalistic attitude toward the patient has much been abandoned in the Netherlands, the culture of suing and litigation Download English Version:

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