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Original article

Epidemiology of malpractice claims in the orthopedic and trauma surgery department of a French teaching hospital: A 10-year retrospective study

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ABSTRACT

Introduction: Orthopedic and trauma surgery is the specialty for which claims for compensation are most often filed. Little data exists on the subject in France, especially in a teaching hospital. We conducted a retrospective study aimed at (1) identifying the epidemiological characteristics of patients filing claims against the orthopedic surgery and traumatology department of a teaching hospital in France, (2) analyzing the surgical procedures involved, the type of legal proceedings, and the financial consequences.
Hypothesis: The epidemiological profile of proceedings seeking damages in France is consistent with the data from European and American studies.
Materials and methods: An observational, retrospective, single-center study of all claims for damages between 2007 and 2016 involving the orthopedic and trauma surgery department of a teaching hospital was carried out. Patients' epidemiological data, the surgical procedure, type of legal proceeding, and financial consequences were analyzed.
Results: Of the 51,582 surgical procedures performed, 71 claims (0.0014%) were analyzed (i.e., 1/726 procedures). A significant increase in the number of cases ($p = 0.040$) was found over a 10-year period. Of these, 36/71 (53.7%) were submitted to the French regional conciliation and compensation commission (CRCI), 23/71 (32.8%) were filed with the administrative court, and 12/71 (13.4%) were submitted for an amicable settlement. The most common reason for which patients filed claims was hospital-acquired infections, with 36/71 (50.7%) cases. Twenty-nine complaints (40.8%) resulted in monetary damages being awarded to the patient, with an average award of € 28,301 (€ 2,400–299,508). Damage awards were significantly higher ($p < 0.05$) for cases involving surgery on a lower limb than those involving an upper limb.
Conclusion: Claims against orthopedic surgeons have been increasing significantly over the last 10 years. Although rare, they represent a significant cost to society. Hospital-acquired infections are the main reason for disputes in our specialization.
Level of evidence: IV, retrospective study.

1. Introduction

People have been filing claims seeking damages in orthopedic and trauma surgery for about 140 years [1]. From the 1980s to the 1990s, the number of actions has increased 10-fold, and the risk of legal action is currently estimated at 0.047% for each surgical procedure [2]. In the United States, between 1991 and 2005, 15% of orthopedic surgeons had new complaints filed against them each year. A third of these complaints resulted in the payment of monetary damages to the patient, with an average award per procedure of € 212,250 [3]. In England, according to the National Health Service Litigation Authority (NHSLA), of the nearly 5 million orthopedic surgical procedures performed between 2000 and 2006, an estimated € 273,348,346 were awarded for bodily injury [4].

The *Société hospitalière d'assurance mutuelles* (SHAM), which insures 81% of public hospitals in France [5], estimates that 67.5% of claims were brought against surgery departments in 2015, and 35.5% of those involved orthopedic and trauma surgery, the specialty most often implicated [6]. In recent decades, no French study has studied legal actions against orthopedic surgeons, especially in the teaching hospital environment with surgeons in training.

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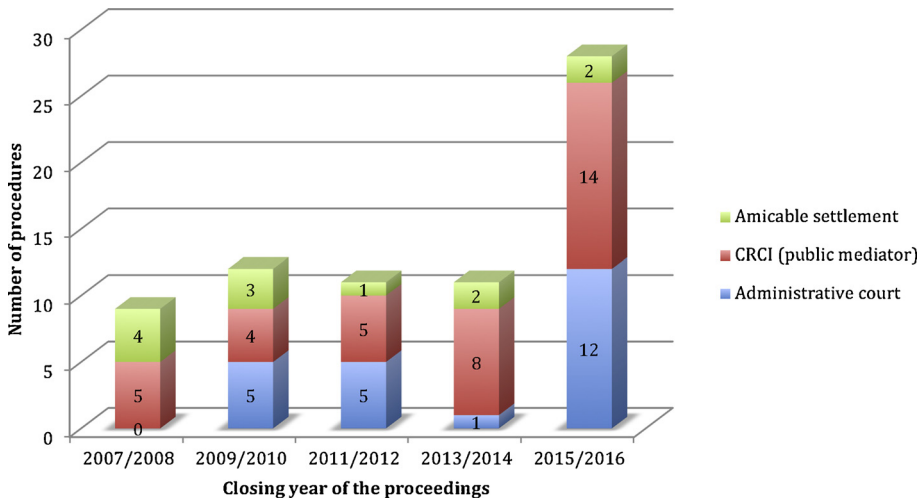

Fig. 1. Number of proceedings closed between 2007 and 2016. CRCI: French regional conciliation and compensation commission.

We conducted a retrospective study aimed at (1) identifying the epidemiological characteristics of patients filing claims against the orthopedic and trauma surgery department of a teaching hospital over a 10-year period in France, (2) analyzing the surgical procedures involved, the legal proceedings and financial consequences. We hypothesized that the epidemiological characteristics were comparable to the data from European and American studies.

2. Patients and methods

2.1. Description of the study

This was an observational, retrospective, single-center study covering all claims for damages related to bodily injury that were closed between January 1, 2007 and December 31, 2016 against the orthopedic and trauma surgery department of the teaching hospital in Tours, France. The claims were compiled by SHAM and divided into three subgroups based on the type of legal proceedings filed by the patient: administrative court (AC), French regional conciliation and compensation commission (CRCI), or amicable settlement (AS). Cases that did not meet the inclusion criteria were excluded: cases involving a minor patient, cases in which there was no expert medical opinion, those involving degenerative spine disease, legal proceedings initiated before 2002, and claims related to anesthesia.

2.2. Data collection methodology

The data were taken from the SHAM database with the help of a medical consultant from this insurance company and the legal department. Each case was analyzed using the appraisal file in SHAM's offices by an independent examiner. The authors promised to respect the confidentiality of the data consulted. The following parameters were studied:

- patients' epidemiological data (age, sex, occupation, medical history, etc.);
- surgical procedure (orthopedic or trauma, location of the injury, whether revision surgery might be necessary, etc.);
- legal proceeding (method of recourse, time to complaint, length of the proceeding, grounds of complaint, types of damage assessed by the expert, etc.);
- financial consequences (damages awarded, court costs, etc.)

2.3. Statistical analysis

For the statistical analysis, we used the Kruskal–Wallis and Mann–Whitney nonparametric tests to analyze the quantitative data results. The mean values are shown with the standard deviation in parentheses. We used contingency tables and Fisher's exact test to compare the qualitative data. A value of $p < 0.05$ was considered significant. The statistical tests were performed using the software StatView 5.0 (Abacus Concepts, Berkeley, CA, USA).

3. Results

Of the 51,582 surgical procedures performed in the department between 2007 and 2016, 71 claims were extracted from the database, representing a litigation rate of 0.0014% per surgical procedure (i.e., 1/726 procedures). The distribution of different types of legal action over 10 years (Fig. 1) found a significant increase in legal actions over time ($p = 0.040$), with 9 proceedings closed in 2006/2007 versus 28 in 2015/2016. The CRCI represented most of proceedings closed since 2013/2014. The 71 claims involved 27 women and 44 men with an average age at the time of surgery of 52.5 years. Of these patients, 17/71 (23.9%) were over 65 years of age (Table 1). There were 22 who did heavy manual labor, 18 who did light manual labor, 6 who were sedentary, and 25 who were retired. A job-related origin was found in 14/71 (19.4%) cases and 15/71 (21.1%) patients had a psychiatric history (depression, schizophrenia, drug addiction, use of psychotropic drugs).

Of these 71 patients, 16 (22.5%) were first operated on at another hospital, with the department and the physician or facility that had previously treated the patient being jointly implicated. In 46/71 (64.8%) cases, surgery was performed by a junior surgeon. The surgery was for trauma in 37/71 (52.1%) cases, with 6/71 (8.5%) of patients having multiple injuries. There were 57/71 (80.3%) patients who underwent repeat surgeries, 42/71 (59.2%) of them at least twice. Surgery on a lower limb gave rise to 48/71 (67.6%) of actions, of which 37/71 (52%) were for hip or knee surgery alone (Fig. 2). An infectious complication was found in 42/71 (59.2%) of cases: 19/42 (45.2%) in orthopedic surgery and 23/42 (54.8%) in trauma surgery. The patient died in 6 of the 71 cases (8,5%). The mean time between the generating event and the complaint was 30.5 months (1–305 months).

The different types of damages are summarized in Table 2. The mean time to obtain an expert medical opinion was 8.9 months (1–88). There was no significant difference between upper limb and lower limb surgery (Table 3) in healing time ($p = 0.74$), loss of

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