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## Short Communication

# The descriptive analysis of civil court decisions of dental malpractice related to infection in Taiwan

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**Abstract** The evaluation of dental malpractice claims database is helpful to analyze the risk and lower the chances of potential litigation. In this descriptive analysis, the Taiwan Judicial Judgment Database was used to analyze the civil court decisions of dental malpractice related to infection from January 1, 2000 to August 31, 2023. After rigor verdicts reviewed, 53 dental malpractice civil judgments related to infection were included and further analyzed. Total 15 lawsuits were required to recover the punitive damages. The overall civil conviction rate was 28.3%. Two cases occurred in the dental department at medical center and 13 cases were found in the local clinics. The top one awarded compensation is dental implant. The amount of compensation was ranged from NT\$ 110,000 to NT\$ 3,000,000. In conclusion, this analysis can provide the important information and reference in the amounts of compensation for dental malpractice in Taiwan.

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## Introduction

Medical malpractice could happen during patient care and even result in injury or damage to a patient. The patient may access to legal support for seeking monetary

compensation by lodging a lawsuit. Competency-based dental education is preparing for the enhancement of patient safety during clinical healthcare environments.<sup>1,2</sup> The implementation of shared decision-making with informed consent, narrative medicine, and evidence-based medicine may reduce medical disputes or lawsuits.<sup>3</sup>

According to the report of National Practitioner Data Bank, the adverse action report and medical malpractice payment report data for dentists were 1293 times and 148.91 million USD in 2022, respectively.<sup>4</sup> In Taiwan, the

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overall criminal conviction rate of dental malpractice was 35.7% which were predominantly found in dental implant therapy and located in the local dental clinics.<sup>5</sup> Recently, the death related to dental treatment was found that there were no causal relationship between death and related dental treatment from court decisions in Taiwan.<sup>6</sup>

Infection control can facilitate a safe working environment for both patients and dentists during the dental treatment procedure.<sup>7</sup> Little is known about the assessment of civil court decisions in Taiwan. Therefore, the descriptive analysis was conducted to evaluate the proportion and category of civil court decisions of dental malpractice related to infection.

## Materials and methods

In this descriptive analysis, the Taiwan Judicial Judgment Database (<https://judgment.judicial.gov.tw>) was used to analyze the civil court decisions of infection related to dental treatments. Since this data bank is freely accessible, approval by the institutional review board was waived for this study.

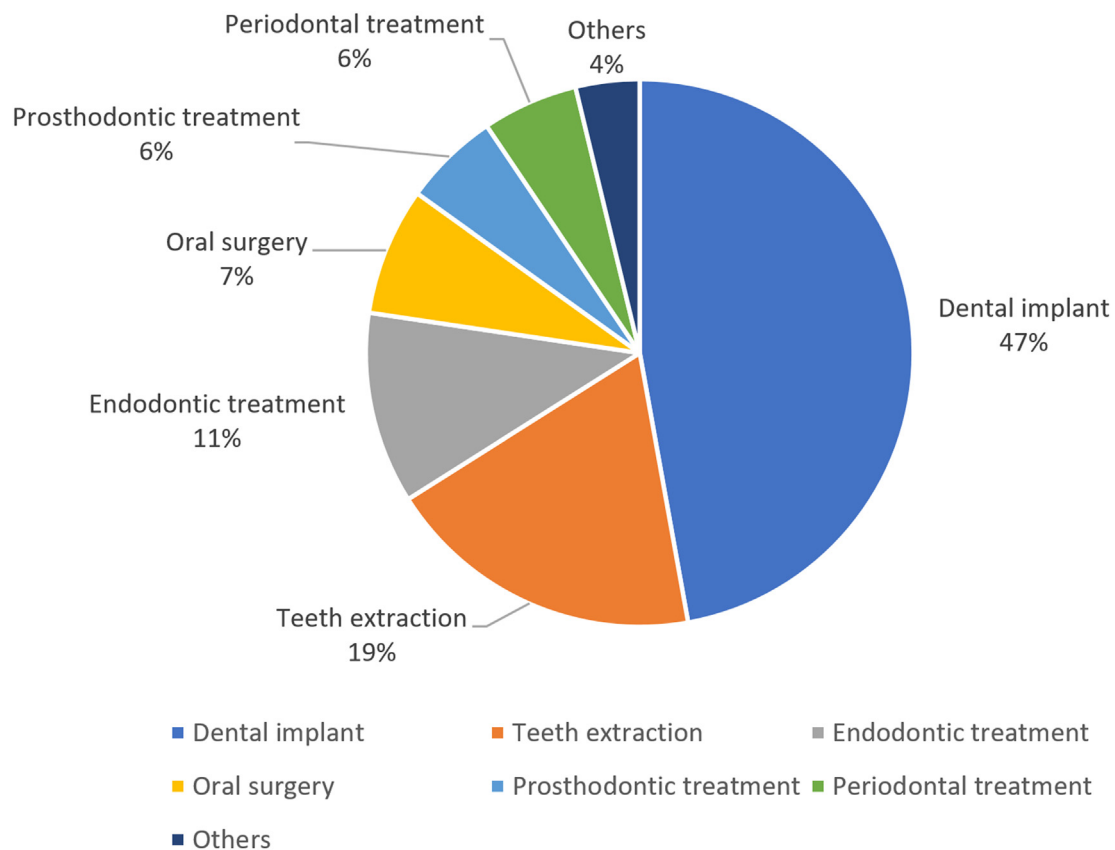
The keywords “dental”, “civil”, and “malpractice” were used to search all civil court decisions from January 1, 2000 to August 31, 2023. The content of each verdict was examined by the first author. The included cases were associated with infection. To ensure the validity and reliability of this study, the first author carried out the screening and subsequent analysis of the civil court

decisions 3 times. In case of discrepancy, the opinion of a second author was requested to achieve consensus. All extracted data were transferred into Microsoft Excel for the descriptive analysis.

## Results

In this study, 136 civil court decisions related to dental, civil, and malpractice were identified from Taiwan Judicial Judgment Database. The screened verdicts were rigorously reviewed and a total of 53 dental malpractice civil claims related to infection were obtained. The distribution of 53 claims of dental malpractice related to infection was illustrated in Fig. 1. Nine cases occurred in the dental department at medical center and 44 cases were found in the local clinics. The top 3 claims of dental malpractice related to infection was dental implant (25 cases), teeth extraction (10 cases), and endodontic treatment (6 cases).

Among 53 dental malpractice judgments, only 15 convicted dentists were required to recover punitive damages. The overall civil conviction rate was 28.3%. The demographic characteristics of 15 civil court decisions of awarded compensation were listed in Table 1. Two cases occurred in dental department at medical center and 13 cases were found in the local clinics. Dental implant was found as the top one awarded compensation, followed by the endodontic treatment. The amount of compensation was ranged from NT\$ 110,000 to NT\$ 3,000,000.



**Figure 1** The distribution of 53 claims of dental malpractice related to infection during January 1, 2000 to August 31, 2023.

**Table 1** The demographic characteristics of 15 civil court decisions of awarded compensation for dental malpractice related to infection.

| Year | Region          | Treatment        | Institute      | Compensation amount |
|------|-----------------|------------------|----------------|---------------------|
| 2009 | Taipei          | Dental implant   | Local clinic   | NT\$ 360,000        |
| 2011 | Taipei          | Dental implant   | Local clinic   | NT\$ 250,000        |
| 2011 | Taoyuan         | Dental implant   | Local clinic   | NT\$ 110,000        |
| 2012 | Taipei          | Dental implant   | Local clinic   | NT\$ 1,080,000      |
| 2013 | Taichung        | Teeth extraction | Medical center | NT\$ 3,000,000      |
| 2014 | Taipei          | Dental implant   | Local clinic   | NT\$ 300,000        |
| 2014 | Taichung        | Dental implant   | Local clinic   | NT\$ 360,000        |
| 2014 | Taipei          | Dental implant   | Medical center | NT\$ 990,000        |
| 2016 | Kaohsiung       | Prosthodontics   | Local clinic   | NT\$ 130,000        |
| 2016 | New Taipei city | Dental implant   | Local clinic   | NT\$ 300,000        |
| 2017 | Taipei          | Dental implant   | Local clinic   | NT\$ 310,000        |
| 2017 | Changhua        | Dental implant   | Local clinic   | NT\$ 310,000        |
| 2019 | Changhua        | Endodontic       | Local clinic   | NT\$ 120,000        |
| 2020 | Taipei          | Dental implant   | Local clinic   | NT\$ 250,000        |
| 2021 | New Taipei city | Endodontic       | Local clinic   | NT\$ 130,000        |

## Discussion

The evaluation of dental malpractice claims is very important that may advise dentist to analyze the risk and lower the chances of any litigation.<sup>9</sup> To the best of our knowledge, this is the first descriptive analysis of civil court decisions of dental malpractice in Taiwan. In this study, the dental implant, teeth extraction, and endodontic treatment were the top 3 civil court decisions of dental malpractice related to infection. However, the common dental malpractice claims in USA were prosthodontics (28%), endodontics (17%), and restorative dentistry (16%).<sup>8</sup> In Italy, prosthodontics (44%), dental implants (18%), and endodontic treatment (13%) were the main dental malpractice claims during a 15-year survey.<sup>10</sup> It seems that the different culture or country may result in such discrepancy. However, it still needs further investigations.

In this study, the civil conviction rate was 28.3%. The amount of compensation was ranged from NT\$ 110,000 to NT\$ 3,000,000. A survey in Italy demonstrated that 74% of sued dentist were convicted.<sup>10</sup> The average indemnity granted by the court of was 18,820.15 EUR. These may raise the important issue of insurance contracts for dental malpractice. By the analysis of dental malpractice cases and the amounts of awarded compensation, the insurance company will be able to know the future standard for setting the cost of liability insurance for dental malpractice.

A limitation of this study needs to be addressed. From the viewpoint of evidences-based medicine, personal data, academic proprietary, dental specialty, and potential etiology were hard to identify from Taiwan Judicial Judgment Database. With the reference of expert testimony from medical review committee, Ministry of Health and Welfare may improve this weakness. However, not every lawsuit will be appraised in this identification process.

Recently, “Medical accident prevention and dispute handling act” will be forced to implement in January, 2024. Therefore, pre-mediation of medical disputes and insurance

will be the standard procedure for future medical dispute management. Taken together, our results can provide the important information and reference in the amounts of compensation for dental malpractice.

## Declaration of competing interest

The authors have no conflicts of interest relevant to this article.

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