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Legal risk analysis of swallowing endodontic file using American cases



Rubber dam isolation is important for the prevention of blood or saliva interference, especially during root canal treatment. The use of rubber dam during endodontic treatment could not only reduce contamination, but also enhance patient safety. In Taiwan, the average frequency of rubber dam usage was only 16.5%.¹ The reasons might be related with lower patients' acceptance, time for application, and low medical fees. However, dental malpractice or iatrogenic injury may cause medical dispute or even lawsuits.

In this article, the authors discussed two judicial cases related to root canal treatment in US. The first case was Lipman v. Lustig in 1963 (assessed from <https://casetext.com/case/lipman-v-lustig>). Briefly, the plaintiff accidentally swallowed the endodontic file without dentist's instruction. However, the defendant dentist did not inform the name of device, but advised plaintiff to eat roughage that the device would pass through. Finally, the court blamed the defendant dentists for malpractice legal liabilities. It is dentist's duty to prevent patients from swallowing any dental instrument during root canal treatment.

The second case was Bean v. Stephens in 1975 (assessed from <https://casetext.com/case/bean-v-stephens>). The use of rubber dam as standard procedure was the main point of this dispute. According to the testimony of both plaintiff and defendant, the court judged the negligence of dentist. It is essential to use rubber dam during endodontic treatment. In addition, adjustment of dental chair to higher position for preventing patient from swallowing tiny dental device was also crucial.

Form American case-law analysis, the use of rubber dam was conformed as a standard operative procedure during endodontic therapy. In Taiwan, such case report of accidental ingestion of endodontic file could be searched.² So far, no relevant lawsuit or court decision was found from

Judicial Yuan Law and Regulations Retrieving System (<https://law.judicial.gov.tw/FJUD/default.aspx>). The aforementioned American law cases could be employed as a pre-cautionary principle. These provoke us to rethink the critical educational and legal dilemmas in endodontic treatment.

The conceptual framework for minimizing potential risk and litigation is illustrated in Table 1. Quality endodontic learning and training are required. By the summative objective structured clinical examination³ and hepatic 3D virtual reality dental simulator⁴ could enhance the dentist's skill and might facilitate patient safety. The implementation of shared decision making in routine dental care is necessary.⁵ Informed consent is important to notify patient's current disease condition, treatment option, and potential risk to establish a faithful foundation. Moreover, the obligation of rubber dam isolation is essential during endodontic treatment. Therefore, malpractice legal liabilities would be reduced.

Taken together, from American case-law analysis, the notion of inform consent and explanation is the first step before endodontic treatment. The obligation of rubber dam isolation should be recognized as the standard operative procedure. This would not only prevent the potential risk occurred during endodontic practices but also minimize the dispute or even litigation.

Table 1 Three key steps to minimize legal risk of swallowing endodontic file.

Step	Action
Education	Quality endodontic training
Strategy	Informed consent
Guidance	Obligation of rubber dam isolation

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Declaration of competing interest

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

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