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A preliminary study on dental practitioners of traditional Chinese medicine in Taiwan during the early days of Japanese colonial period

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There are many records about dental treatments in the ancient China. The earliest known record is "Fifty-Two Prescriptions" unearthed from the Han tomb at Mawangdui (from 193 BC to 168 BC), which includes the use of elm bark, osmanthus fragrans, and several other Chinese medicines, which are ground into powders and then mixed with lard to fill into tooth cavity. During the Qianlong Qing Dynasty, Liang, Yu-sheng, the Qing Dynasty scholar, wrote in his book: "There are tooth filling shops in today's markets, and there is an advertisement saying that the tooth fillings look like real ones. These descriptions have been around since the Song Dynasty." In the scattered records, there was no detailed descriptions related to how ancient Chinese people filled the tooth decay. However, most of the Chinese medicine prescriptions only use oral Chinese medicines to treat oral diseases such as halitosis, stomatitis, thrush, toothache, gingival swelling, periodontitis, and alveolar pyorrhea. In Taiwan history, since the migration of Han immigrants to Taiwan in the early days, traditional Chinese medicine (TCM) has also entered the Taiwanese society. As the number of Han immigrants to Taiwan increased, the TCM in Taiwan developed progressively

during the Qing Dynasty, which might also include the diagnosis and treatment of toothache-related diseases. However, in Taiwan's early literature of TCM, there is a great lack of records about the appearance of dental practitioners of TCM.¹ A medical qualification examination for the TCM practitioners in the early years of Japanese colonial period in Taiwan gave us the opportunity to get a glimpse of the appearance of dental practitioners of TCM from relevant news reports.

In the early days, the Japanese medical community held a discriminatory attitude towards the TCM. Therefore, after Japan ruled Taiwan, it hoped that the development of colonial medicine would eventually result in the replacement of TCM practitioners by the modern physicians of western medicine. However, during the transitional period when medical manpower was scarce in the early days of colonial rule, TCM practitioners had to continue performing their duties for the diseased people in Taiwan. The colonial government held a medical qualification examination for the TCM practitioners in 1901 (Meiji 34). Through this examination, in addition to understanding the situation of TCM practitioners in Taiwan at once, it also brought them

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into the management of the medical legal system. At that time, there were 2126 applicants from all over the Taiwan. A total of 1097 people passed the examination with a passing rate of 51.6%. However, due to special considerations under colonial rule, a total of 1928 medical licenses were issued to the TCM practitioners after this examination.² In previous official records, the specialty classification of these examination-certified TCM practitioners was not described in detail. In this article, we tried to search news reports related to dental practitioners of TCM taking this examination from the old newspapers, and found two news reports in the Chinese version of the Taiwan Daily News newspaper (Taiwan nichì nichì shinpo) in December 1901, as shown in Table 1.

From the content of the news reports, we found that a written examination was carried out by the public doctors at various places of Taiwan and the applicants participated in the examination group by group in different areas of Taiwan. The candidates were registered in two categories, including internal medicine and surgery according to their specialties. The examination questions in the news reports included the diseases such as dysentery,

opium poisoning, snake bite paralysis, tuberculosis, and smallpox. These topics should be the most common diseases or problems in Taiwan at that time. The news reports mentioned that four surgeons took the examination regarding the topics of dentistry and ophthalmology, indicating that dentistry and ophthalmology are classified as branches of the surgery in TCM at that time. However, some of these four candidates were illiterate, which suggests that the level and quality of candidates have a great difference. However, TCM practitioners in internal medicine were at least literate because they had to prescribe Chinese medicines for the patients. For these four candidates, the examiner adapted to conduct the examination in the form of an oral examination, focusing on the pathogenic mechanisms of toothache and eye pain. Apparently, the examiner did not get the answer he wanted. The response of these TCM surgeons of dentistry and ophthalmology was just to extract the teeth or apply Chinese medicinal powders on the eyes to complete their treatments, respectively. This oral examination may accidentally become the first examination for dental practitioners of TCM in Taiwan history.

Table 1 Two news reports related to dental practitioners of traditional Chinese medicine (TCM) taking the medical qualification examination for TCM practitioners in the Chinese version of the Taiwan Daily News newspaper (Taiwan nichì nichì shinpo) in December 1901 (Meiji 34).

Date	Title	Report content
December 10, 1901 Page 3	Examination for doctors	More than a hundred doctors from Dadaocheng had applied for registration in the specialties of internal medicine and surgery. The examination dates were announced to the public by beating gongs. The doctors were divided into classes according to the number. Last Saturday, the police station first summoned dozens of the doctors to the Taipei Government Office. After counting and confirming their names and numbers, the questions were asked to the doctors participating the examination. First, how can dysentery be cured? Secondly, what methods and medicines should be used for treatment of opium poisoning and snake bite paralysis? The major topics were divided into the categories of internal medicine and surgery. I heard (from those who took the examination) that many internal medicine physicians of TCM can answer the questions for many chapters, but there are surgeons who do not finish writing the examination papers.
December 11, 1901 Page 3	Continuation of examination	On the morning of the next day, a total of 28 doctors from the second shift arrived at the government office. When each seat was preparing papers and pens, a mainland (Japanese) public doctor gave questions. The first one was tuberculosis, and the second one was smallpox. The examination was divided into two parts for the specialties of either internal medicine or surgery. The candidates wrote treatises with clear instructions on the causes and symptoms of diseases, and there was no need to prepare a prescription. It took 2 h to complete the examination papers. In addition, there were four surgeons who took the topics of dentistry and ophthalmology. However, some of them were illiterate. This was revealed to the supervisor. Then, the supervisor asked the candidates of dentistry how you could diagnose the cause of toothache. They said that the sudden onset of wind and fire and the pain by beetles can all cause the disease of toothache. Although we engage in this business, we do not consider the cause. As long as the patients come for extraction of their teeth, we just make a small amount of profit to support our life. The supervisor asked them again that if you extract a small tooth, you can shake it, but if you extract a big tooth, how easy can it be? They said that the iron tools can help. The supervisor recorded the oral dialogue (response) in the record book. Later, the supervisor asked the candidates of ophthalmology about their treatment for eye pain, and they said that if the patients with the eye pain come for a consultation, they will make Chinese medicinal powders and apply them on the diseased eyes of the patients. There is no way to consider the cause of any eye disease. After a while, the candidates of internal medicine had finished their examination papers one after another. Two of them had scribbles all over the examination papers, and some still could not finish writing the examination papers.

Although it was unclear from the news reports whether these candidates obtained medical licenses or not, we found in another historical record that an examination-certified dental practitioner of TCM proposed some TCM prescriptions for treatment of toothache during an interview, including those used for pain relief after tooth extraction.¹ We conclude that in Taiwan during the early days of Japanese colonial period, the dental practitioners of TCM mainly dealt with oral diseases and problems through the symptom relief passively, including the extraction of hopeless teeth and the use of TCM prescriptions to eliminate the pain caused by oral and dental diseases. In fact, by the 1920s, the dental profession in Taiwan had already progressed into an appearance of a complete modern dentistry, and the treatment technology of conservative dentistry had absolute advantages.^{3,4} Therefore, it is an inevitable and irreversible process to completely replace the dentistry of TCM by the modern dentistry in Taiwan. However, up to date, the standard TCM formulas included in Taiwan Herbal Pharmacopeia still have many TCM prescriptions for treatment of oral mucosal diseases and toothache.⁵ We still have the enough reason to believe that the researches on these TCM formulas related to oral disease treatment will contribute to the development of modern dentistry.

Conflicts of interest

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

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