



Correspondence

The exploration of the earliest dental chair manufacturer in Taiwan



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The modern medicine and the medical education system for cultivating the physicians were first introduced to Taiwan during the Japanese colonial period (1895–1945). Although the Japanese colonial government of Taiwan did not establish an education system to cultivate the dentists throughout the whole colonial period. With the introduction and development of holistic modern medicine, the modern dentistry in Taiwan has also developed. The earliest official record of a dental clinic in Taiwan was in 1896, when Dr. Chiyomatsu Sakai applied for a license to open his own dental clinic on the main street of Taipei City. The dental treatment room attached to the Department of Surgery was established in 1906 in the Taiwan Government Taipei Hospital. It was the earliest predecessor of the Department of Dentistry of National Taiwan University Hospital (NTUH). Its director, Dr. Masayoshi Tomisawa, was also the first hospital dentist in Taiwan.^{1,2} Interestingly, the newspaper reports at the time specifically pointed out that dental instruments and equipment were ordered from the mainland of Japan. This meant that there were difficulties in opening the dental clinics or the dental businesses of the hospitals in Taiwan in the early days. This is because there were no local manufacturers of dental materials and equipment at that time, and all dental preparations had to be imported.³ Today, when any dentist in Taiwan opens his or her own dental clinic or purchases the dental materials and equipment, he or she has both the domestically produced and the imported materials and equipment to choose

and buy. However, the research on the dental history mostly focuses on the development of dentistry in terms of education, manpower, systems, and knowledge and technology, but pays little attention to the development of the dental materials and equipment industry. The purpose of this study was to conduct a preliminary exploration of the earliest dental chair manufacturer in Taiwan.

This article used the historical research method to search the information about the dental chair manufacturers in Taiwan, and further excavate the descriptions of the events related to the earliest dental chair manufacturer in the relevant documents. The evolution of the first dental chair manufacturer was initially restored as follows.

The Taiwan's dental industry developed rapidly during the Japanese colonial period, and then it came to the problem of the supply of the dental materials and equipment. In addition to relying on imports, the most suitable strategy for the dental materials and equipment was directly supplied by the local manufacturers. Following this trend, the Taiwan's first dental chair manufacturing factory was established in Taichung in 1938, named Dah Yang Dental Machinery Factory which manufactured the dental chairs and peripheral diagnostic and treatment equipment, laying the production technology foundation of the dental materials and equipment for the Taiwan's dental industry. Due to the chaos of the World War II, the business of the manufacturing factory was suspended for a period of time and the company underwent a change of government. A

historical document from the Taiwan Historica about Ta Yang Iron Works' application to the new government to establish a factory in 1952 showed that there were only three workers at that time and only human-operated pedal dental engines and agricultural tools were the main products. (Due to the language changes after the war, the English translation of Dah Yang was changed into Ta Yang.)

This meant difficulties in resuming business after the war. Before the 1970s, Ta Yang's products were mainly the upright dental units. In the 1980s, Ta Yang continued to devote itself to the research and development of innovative designs, and finally produced the first one-piece (horizontal) dental chair and other products in 1984 (Fig. 1). It also developed the export market to provide its products to

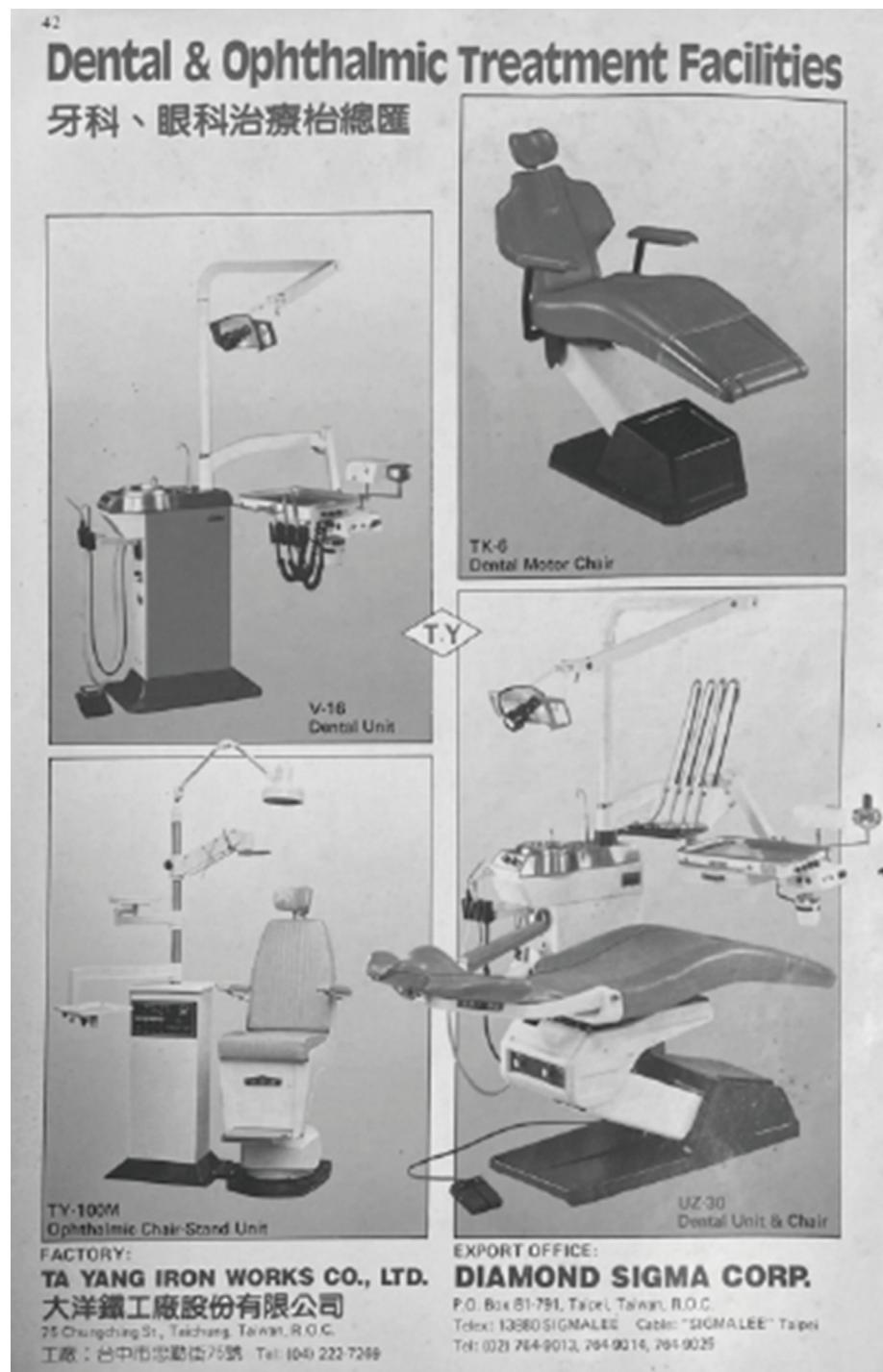


Figure 1 The product summary of Ta Yang Iron Works Company in the 1980s, which included the ophthalmic chair (lower left one) and the dental chairs (the other three). This image was available and accessed from the homepage of Kuang Yeu Medical Company (https://www.kuang-yeu.com.tw/article_d.php?lang=tw&tb=1&id=30) [Accessed on December 1, 2024].

more medical institutions in other countries. Due to changes in the industrial environment, Ta Yang was dissolved and closed in 1990. Its assets were acquired by Kuang Yeu Medical Company, which took over its history and continued its development to this day.

The first commercially manufactured dental chairs did not appear until 1850, when wider industrialization in the United States and Britain began to meet the needs of dentistry.⁴ However, it was not until 1896 that the Taiwan's first officially recognized dentist opened his own dental clinic in Taipei. From that time, Taiwan began to have demand for the introduction of the dental materials and equipment. The first commercially manufactured dental chairs truly made in Taiwan were not available until 1938. It took 42 years after the first dentist came to Taiwan, showing that the development of manufacturing technology for the dental materials and equipment may be more difficult than that of dental manpower. After the Taiwan's dental materials and equipment industry experienced the devastation of the World War II, they rebuilt the territory of Taiwan's dental materials and equipment from the ruins after the war. Today, it is diverse and prosperous in terms of research and development, design, manufacturing, import, export, and sales of dental products, etc., showing the resilience of the Taiwan's dental industry. In the past, the research on the dental history mostly focused on a dentist-centered perspective.⁵ Therefore, the development history of the dental materials and equipment industry was rarely discussed. However, the development of the dentists and the development of the dental materials and equipment industry are closely related and influenced each other. The industrial development history of the dental materials and equipment deserves to pay more attention in the future.

Declaration of competing interest

We are grateful to Kuang Yeu Medical Company for preserving information about Ta Yang Iron Works Company. This contributes to the exploration of the earliest dental chair manufacturer in Taiwan.

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Feng-Chou Cheng^{a,b,c}
Ling-Hsia Wang^{d,*}
Chun-Pin Chiang^{e,f,g,h,*}

^aChia-Te Dental Clinic, New Taipei City, Taiwan

^bSchool of Life Science, College of Science, National Taiwan Normal University, Taipei, Taiwan

^cScience Education Center, National Taiwan Normal University, Taipei, Taiwan

^dCenter for the Literature and Art, Hsin Sheng Junior College of Medical Care and Management, Taoyuan, Taiwan

^eDepartment of Dentistry, National Taiwan University Hospital, College of Medicine, National Taiwan University, Taipei, Taiwan

^fGraduate Institute of Oral Biology, School of Dentistry, National Taiwan University, Taipei, Taiwan

^gDepartment of Dentistry, Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Hualien, Taiwan

^hInstitute of Oral Medicine and Materials, College of Medicine, Tzu Chi University, Hualien, Taiwan

*Corresponding author. Department of Dentistry, Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, and Institute of Oral Medicine and Materials, College of Medicine, Tzu Chi University, No. 707, Section 3, Chung-Yang Road, Hualien, 970, Taiwan.

**Corresponding author. Center for the Literature and Art, Hsin Sheng Junior College of Medical Care and Management, No. 418, Gaoping Section, Jhongfong Road, Longtan Township, Taoyuan, 32544, Taiwan.

E-mail addresses: milkegg5452001@gmail.com (L.-H. Wang), cpchiang@ntu.edu.tw (C.-P. Chiang)

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