Education for a Traditional Medicine in Medical Schools in Japan

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Objectives: This study aimed to overview the current education status of a traditional medicine by medical schools in Japan.

Methods: We surveyed the literatures regarding a traditional medicine education in Japan, and get the information via email-interview with an officer of medical schools in Japan as well as from their websites.

Results: Japan’s education ministry presented the appropriateness of education for traditional medicine to medical students in 2001, and most of medical schools begun to set up the classes in Japan. We received the detail information of the traditional medicine education from 21 medical schools. Nineteen colleges(approximately 90%) of those have the regular classes for traditional medicine while two colleges don’t have the education program for the traditional medicine. Most of medical schools have single class for introduction of traditional medicine, and have average 16.2±8.8 hours during the 4th grade(61.9%).

Conclusions: We presented the general feature of education for traditional medicine in Japan, and this result would be basic information for an establishment of a strategy regarding the enhancement of national competitiveness of traditional Korean medicine.

Key words: traditional medicine, integrative medicine, kampo medicine, globalization

Introduction

There are increasing interests in traditional medicine worldwide due to the currently intensive attention for quality of life and limitations of conventional medicine against chronic diseases³. A various types of traditional medicines including Oriental medicine are called as a complementary and alternative medicine(CAM). A report from ‘Global Industry Analysts, Inc.’ presented that the world market size of CAM industry will grow from 89.8 billion in 2011 year 114.1 billion dollars, as a 6.0% of grow rate annually⁴.

According to these environmental changes of CAM market, medical schools in Korean and other countries started to teach the subjects related to CAM including traditional medicines⁵⁶. The convention medical community now calls integrative medicine, the combined form of western medicine and traditional medicine. Korean education association of integrative medicine now takes the necessary of education of
CAM in medical schools in Korea for granted, and proposed a standardized curriculum of the integrative medicine for CAM education\(^5\). A graduate school for CAM was established in Chon medical school in 2000\(^6\), and a department of integrative medicine was opened in a Catholic medical school in 2004\(^7\). About 30 of total 41 medical schools in Korea have started to teach the lectures for CAM by 2010\(^8\).

On the other hand, Japan and Korea has a geological and cultural similarity in term of a traditional medicine, called as Kampo medicine, from Chinese medicine, while a Japan has a different license system for medical doctor\(^9\). After a medical license for Oriental doctor was repealed in 1874, a traditional medicine has been practiced by doctors learned western medicine in Japan. Accordingly the general level of the Japanese traditional medicine and its public service is known to be lower than China or Korea\(^10\). Japan however has directed their efforts to the development of Kampo medicine recently such as making a board system for Kampo medicine specialist since 1989 and including 149 of herbal medicines in a list of public insurance-covering drug\(^11\). In addition, Japan has an approximately 20% of world market for CAM, and shows a competitiveness in manufacturing herbal products and its market\(^12\).

In order to produce essential information for preparation against rapid changes of the integrative medicine-derived environment, this study aimed to review the education of traditional medicine in medical schools in Japan which tried early to combine the Western medicine and Oriental medicine.

**Methods**

1. **Study design**

This study surveyed the current status of education of traditional medicine in medical schools in Japan regarding the subjects and hours of classes.

2. **Data collection and analysis**

Literature survey was conducted using electronic database of Japan statics(http://www.e-stat.go.jp/), KISS(http://kiss. lstudy.com/), and PubMed(http://www.ncbi.nlm.nih.gov/pubmed) from their inception to February 28, 2015. Search terms comprised combinations of the following keywords: "Japan", "traditional medicine", "Oriental medicine", "Kampo medicine", "complementary and alternative medicine" and "education". Various related reports were searched form homepages of the government-related organizations including Japan’s education ministry(www.mext.go.jp/), Japan’s Ministry of Health(http://www.mhlw.go.jp/), Japan Society for Oriental Medicine(www.isom.or.jp), and Korean institute of Oriental Medicine(www.kiom.re.kr). In addition, and we get the information from websites of medical schools in Japan and via email-interview with their officer in case of unclear.

**Results**

1. **Brief history of traditional medicine in Japan**

The ancient Japan received medical knowledge firstly from Korea, and then directly imported the Chinese medicine after Jichong(知聰) took various medical text books for herbs, formulae and acupuncture from Oh-kingdom(吳) to Japan in 562\(^13\). An ancient doctor, Tasirosanki(田大三喜, 1465∼1544) advocated the theory of eight principle pattern(八綱辨證) by receiving Chinese medicine of Geum-Won era(金元時代), and Hou se-pai(後世派) stressing a therapeutic following confirming symptom(察證辨治) begun by Manasedosan(曲直瀬道三, 1507∼1594)\(^14\). From 18 century, several typical groups focusing their medical theories had been developed, likely Gu bang-pai(古方派), Zhe zhong-pai(折衷派), and Gu zheng-pai(考證派)\(^15,16\). Japanese traditional medicine however declined rapidly after the abandonment of Oriental medicine via reform plan for medical system in 1874(Fig. 1).

2. **Brief history for education of traditional medicine in Japan**

Japanese traditional medicine declined after the abandonment of Oriental medicine by government in 1874. Some doctors individually have succeeded the traditional medicine, and Japan Society for Oriental medicine was established by
mainly young doctors in 1950, which regularized the study of the traditional medicine in Japan. The board for Oriental medicine specialist was started since 1989, and the research and education for traditional medicine was conducted by these specialists in Japan. From the mid-1990s, several medical schools began to open the classes for traditional medicine in Japan. Japan’s education ministry presented the appropriateness of education for traditional medicine to medical students in 2001. Toyama University, a national medical school having class of traditional medicine, developed an education plan, called “Model Core Curriculum”, and a survey study in 2009 that most of medical schools prepared the education of traditional medicine since 2004 (Fig. 2).

3. Analysis of Kampo medicine education in medical schools in Japan

The total number of medical school is 80, as 42 belonged in national University, 8 in public University and 30 in private University respectively. Ten medical schools presented the information for education of traditional medicine in their online website, while others didn’t show the information. We had sent email to an officer of other medical schools (58 schools) for asking the detail information, and then 11 schools gave us responses. Among above 21 medical schools, Miyazaki University and Gunma University didn’t have the class for traditional medicine currently, and others have the education classes. Four medical schools of Kitasato, Toho, Kochi, and Toyama University have 2 subjects, while the rest have only one subject, introduction of Oriental medicine, Kampo medicine, or integrative medicine. The average duration of education 16.2±8.8 hours, and 61.9% of schools educate students on 4th grade (Table 1).

Discussion and Conclusion

Japan traditional medicine had declined due the aban-
Table 1. Completion Status of Kampo Medicine Subjects in Medical School, Japan

| Name of university                  | Name of subjects                      | Hours | Grade |
|-------------------------------------|---------------------------------------|-------|-------|
| Aichi Medical Univ.(http://www.aichi-med-u.ac.jp/) | Oriental medicine                    | 16    | 4     |
| Dokkyo Medical Univ.(http://www.dokkyomed.ac.jp/) | Oriental medicine                    | 9     | 4     |
| Fujita Health Univ.(http://www.fujita-hu.ac.jp/) | Oriental medicine                    | 24    | 3     |
| Hiroaki Univ.(http://www.med.hiroaki-u.ac.jp) | Clinical pharmacology and Kampo medicine | 24    | 4     |
| Hyogo College Of Medicine(http://www.hyo-med.ac.jp/) | Introduction to traditional medicine  | 12    | 3     |
| Juntendo Univ.(http://www.juntendo.ac.jp/) | Integrated clinical medicine          | 6     | 4     |
| Keio Univ.(http://www.keio.ac.jp/index-jp.html) | Kampo medicine                       | 12    | 4     |
| Kitasato Univ.(http://www.kitasato-u.ac.jp/) | Oriental medicine                    | 12    | 3     |
|                               | General medical care                  | 24    | 6     |
| Kochi Medical Univ.(http://www.kochi-ms.ac.jp/) | Alternative medicine                 | 30    | 3     |
|                               | Medical communication                 | 30    | 4     |
| Kyorin Univ.(http://www.kyorin-u.ac.jp/) | Introduction to Kampo medicine       | 18    | 4     |
| Nagasaki Univ.(http://www.med.nagasaki-u.ac.jp/) | Clinical core lecture                | 6     | 5     |
| Nagoya City Univ.(http://www.nagoya-cu.ac.jp/1.htm) | Seminar for Kampo medicine           | 12    | 4     |
| Osaka City Univ.(http://www.osaka-cu.ac.jp/ja) | Introduction to Kampo medicine       | 12    | 2, 3, 4 |
| Shinshu Univ.(http://www.shinshu-u.ac.jp/) | Oriental medicine                    | 29    | 3     |
|                               | Oriental medicine(basis)              | 10    | 2     |
|                               | Oriental medicine(clinical)           | 15    | 4     |
| Tottori Univ.(http://www.med.tottori-u.ac.jp/) | Topics in clinical medicine 2        | 7     | 6     |
| Toyama Univ.(http://www.med.u-toyama.ac.jp) | Introduction to Kampo medicine       | 34    | 2     |
|                               | Kampo medicine care                  | 15    | 4     |
| Wakayama Medical Univ.(http://www.wakayama-med.ac.jp/) | Kampo medicine                      | 13    | 4     |
| Yokohama City Univ.(http://www.yokohama-cu.ac.jp/) | Clinical pharmacology and Oriental medicine | 3     | 4     |

The establishment of Oriental medicine in 1874; however the increase of concern about CAM worldwide leaded the preparation of new education plan by Japan’s education ministry, a core curricula learning traditional medicine in all medical schools in 2001\(^\text{17}\). Since then, among the 80 medical schools, a rapidly increasing number of them have integrated traditional medicine, called as Kampo medicine, into their curricula\(^\text{19}\), and most University hospital had opened Kampo clinic by 2009\(^\text{18}\).

We had surveyed the current status of education for traditional medicine in Japanese medical schools by February 28, 2015. Beside 10 medical schools presenting the information for education of traditional medicine in their website, we received the detail information via email from other medical schools. A recent report presented that Kampo medicine has been taught at all 80 medical schools and universities since 2007\(^\text{20}\). Another study reported that 98% of the medical schools have the at least one education class for traditional medicine in 2012\(^\text{21}\). In our study, however two schools, Miyazaki University and Gunma University, don’t have any class for traditional medicine currently. Therefore it is supposed that several medical schools had stopped the Kampo education program after 2009 year.

From our survey, only four medical schools of have 2 subjects, while the rest have only one subject. The name of subjects involved the introduction of Oriental medicine, Kampo medicine, traditional medicine, and integrative medicine. Another study reported that the subjects included mainly the basis of traditional Japanese Kampo medicine by 81% of the schools, and Chinese medicine by 19%, and Western alternative medicine by 20%\(^\text{23}\). The average duration of Kampo medicine education 16.2±8.8 hours. This means that most medical schools are teaching the general concept of traditional medicine during one semester. Any Japanese licensed physician can prescribe Kampo drug, moreover it was known that 70% to 97% of Japanese physicians prescribe Kampo medicine\(^\text{22}\). Japanese medical schools however only offer students traditional medicine education for an extremely limited amount of time. Even though the medical system is different, Chinese medical schools for western medicinal doctors provide around 80 hour class of traditional Chinese medicine\(^\text{24}\).
On the other hand, Japan has a board system for Kampo medicine specialist since 1989. After they achieved doctor license, they have to pass the examination with reporting their 50 clinical cases of the experienced Kampo medicine. Over 2,000 of Kampo medicine specialist has been licensed by 2015. Above fact would indicate that the practical education of traditional medicine in Japan has been conducted after graduation of medical school. Regarding the Kampo medicine education, the greatly limited class, un-standardized curriculum, and the small number of well-trained full-time instructors are blamed for the hindrance of the improvement of Kampo education. Many Japanese doctors however practice frequently traditional medicine utilizing simple handbooks from the perspective of modern Western medicine. This might be due to the development of especially Kampo extract formulations and extensive scientific evidence for the Kampo formulae.

This study has limitation of restricted data because Japanese literatures might be missed and the number of medical schools with full information was small. Nevertheless this study helped us to understand the current status of Japanese traditional medicine education and their trial for development of Japanese traditional medicine. These results would be basic information for an establishment of a strategy regarding the enhancement of national competitiveness of traditional Korean medicine.

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Education for Traditional Medicine in Japan

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