Evidence for Japanese oriental (Kampo) medicines: how to utilise the evidence of Kampo medicine in daily practice

T Kogure*

Abstract

Introduction
The evidence concerning Japanese oriental (Kampo) medicine has been accumulated over two decades. In this regard, many physicians use the Kampo formula in the field of primary health care in Japan. However, Kampo medicines have other paradigms that differ from Western medicine. Therefore, the characteristics and specificity of Kampo medicine must be comprehended while using them based on clinical evidence.

This article provides a review of the recent clinical trials concerning Kampo medicines and the discussion on ‘how to utilise the evidence of Kampo Medicine’.

Conclusion
We have discussed the methods of using Kampo medicines and where the development of each use has reached. Where evidence has been used, specificity of Kampo medicine should be understood and evidence for this medicine is expected to increase in the near future.

Introduction
In Japan, at present, Kampo medicines are prescribed by many physicians, showing wide clinical applications from primary health care to the treatment of intractable diseases1–4. Within this background, there are two education-based factors. One of the factors is to intrigue the students with the question ‘Can you give an outline of traditional Japanese medicines?’, which was introduced in the medical education model core curriculum in March 2001, and certain Kampo medicine education began to be provided at 80 medical schools throughout the nation in 2007. The other factor is the advancement of the project for the standardisation of the contents of this education.

Kampo treatment in daily clinics at present can be classified into three major forms: (1) the use of Kampo prescriptions according to the methodology of traditional medicine, (2) the administration of Kampo medicines based on the concept of diseases/pathological conditions in Western medicine and concept of elementary Kampo medicine and (3) the evidence-based administration of Kampo medicines. Forms (2) and (3) are observed in treatment by physicians other than Kampo specialists, and when no effects of administered Kampo drugs are observed, patients may be referred to specialists.

Such differences in treatment forms according to systems for the evaluation of the pathological condition are not observed in Western medicine. In this article, we have given an outline of ‘evidence for Kampo medicines’ with a consideration of the aforementioned treatment forms observed at present, and have discussed the present status/specificity/methods of the use of evidence for Kampo medicines.

Discussion
The author has referenced some of its own studies in this review. These referenced studies have been conducted in accordance with the Declaration of Helsinki (1964) and the protocols of these studies have been approved by the relevant ethics committees related to the institution in which they were performed. All human subjects, in these referenced studies, gave informed consent to participate in these studies.

Present status of evidence for Kampo medicines
When evidence is discussed, it should be understood that there are three stages for evidence, i.e., ‘generate’, ‘convey’, and ‘use’. So-called evidence-based medicine (EBM) corresponds to ‘use’ among the three stages, and consists of four steps: (1) formulation (formulate a clear clinical question based on a patient’s problem), (2) search of the literature (obtain information to answer the question), (3) critical appraisal (evaluate the evidence for its validity), and (4) application to patients (consider the applicability to each patient)5. In Western medicine, methodology for the fourth step in EBM has been discussed. However, to use evidence (perform EBM), efforts to ‘generate’ evidence are necessary. In Japan, although EBM has been practiced since the latter half of the 1990s, the accumulation of evidence for Kampo medicines is still inadequate. Since 2000, randomised-control trials (RCTs) have rapidly increased; however, due to the specificity of Kampo medicines, we consider that the clinical practice of Kampo medicine based on EBM is difficult at present. Although evidence may further accumulate in the future, clinical Kampo practice is basically performed according to the methodology of traditional medicine6,7.

The absence of a direct connection between evidence for Kampo medi-
A: allergic rhinitis

B: Yokuininto, Boiogito, Keishishakuyakuchimoto, Daibohuto and KER

Figure 1: Diagnosis by Western Medicine and 'Sho' (traditional medical evaluation). (a) Since allergic rhinitis has often been treated successfully by shoseiryuto (one of the Kampo formulae), shoseiryuto may be administered to patients with allergic rhinitis without consideration of 'Sho'. In other words, the patients with allergic rhinitis resemble the target group of shoseiryuto. (b) In contrast, the indications for RA differ from KER (one of the Kampo formulae). The adaptation of one Kampo formula cannot cover the pathological conditions of RA. Therefore, one Kampo formula among many possible Kampo formulae must be selected in the treatment for RA.

In addition, Yokuininto, Boiogito, Keishishakuyakuchimoto, Daibohuto and KER are Kampo formulae. Approximately, Yokuininto and Boiogito are applicable to the early RA with swollen joints, Keishishakuyakuchimoto and Daibohuto are administered to the advanced RA with frail joints. Keishinieppittokaryojutsubu is generally used for the RA patients in the middle period.

Specificity of evidence in Kampo medicine

In Western medicine, RCTs are performed to evaluate the effects of certain drugs on certain diseases or associated symptoms, and evidence is obtained. Since Western medicine was born using the methodology of natural science, EBM is a rational methodology. However, for application to patients as mentioned in step 4 of the EBM, there is no established methodology. In Western medicine, the fourth step in EBM is considered to be the most important step, although this step has poor objectivity. In Kampo medicine, the problem in the practice of EBM is difficulty in performing RCTs to generate evidence compared with Western medicine. Kampo medicines are used based on Kampo diagnosis (‘sho’, pattern/syndrome), and, therefore, even if the diagnosis based on Western medicine is the same, the Kampo medicines administered differ among patients (Figure 1b). RCTs, in which the same type of Kampo medicine is administered for the same disease, are dissociated from clinical Kampo practice. Therefore, there is a method of RCTs in which patients with the same disease based on Western medicine are classified according to ‘sho’ (stratification). Indeed, we previously clarified the effects of Kampo formulations with tonic effects in frail elderly subjects in a double-blind RCT. In this RCT, RCTs since 1986 to the present and produced structured abstracts. There is quite a bit of evidence for Kampo medicines now. Structured abstracts and details of the collection of RCTs on Kampo medicines can be obtained on the home page of the Japan Society for Oriental Medicine. There are 415 articles on Kampo medicines in January 2013, and further evidence is expected to accumulate in the future.
CompeƟƟng interests: none declared. ConƟFLICT OF INTERESTS: none declared.

All authors contributed to the concepƟon, design, and preparaƟon of the manuscript, as well as read and approved the fiƟnal manuscript.

All authors abide by the AssociaƟon for Medical Ethics (AME) ethical rules of disclosure.

Licensee OA Publishing London 2013. Creative Commons Attribution Licence (CC-BY)

of Kampo medicines for diseases where indications for Kampo medicines disagree with the pathology of Western medicine, such as for RA. In addition to this method, we have recently sought a method to analyse the pathology of Western medicine in responders to Kampo medicines. Through observational studies, we have accumulated cases of Kampo medicines used varying even among patients with the same disease. Therefore, in addition to the work to ‘generate’ evidence, the accumulation of objective case reports is indispensable\(^2\). This accumulation will generate quantity supporting evidence\(^2\), increasing the scientific value and rank of Kampo medicine. As an extension of objective case reports, there are studies analysing responders to Kampo medicine\(^2\), which is one of the methodologies to enhance the ‘statistical significance’ of the clinical effects of Kampo medicines.

**Future prospects**

Kampo medicine is a therapeutic system in which the accumulation of quantitative data is difficult. The Kampo medicines used vary even among patients with the same disease. Therefore, in addition to the work to ‘generate’ evidence, the accumulation of objective case reports is indispensable\(^2\). This accumulation will generate quantity supporting evidence\(^2\), increasing the scientific value and rank of Kampo medicine. As an extension of objective case reports, there are studies analysing responders to Kampo medicine\(^2\), which is one of the methodologies to enhance the ‘statistical significance’ of the clinical effects of Kampo medicines.

**Conclusion**

We have outlined the present status and methods of use of evidence for Kampo medicine. When evidence is used, it is important to understand the specificity of Kampo medicine. In future, evidence for Kampo medicine is expected to increase further.


