

Construction of Medicinal Material Contents

Sanghyun Kim
Korea Institute of Oriental Medicine, Korea
E-mail : kshr@kiom.re.kr

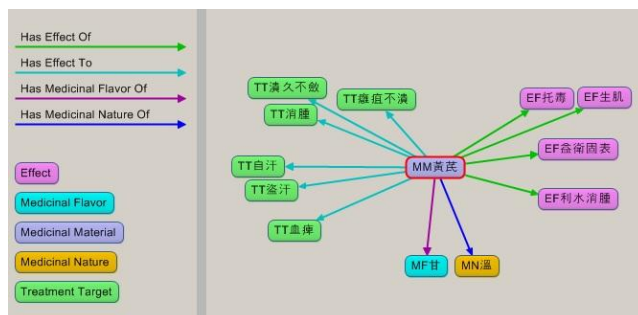
1. Introduction

From ancient times, there has been a saying that ‘Medicine and Food Have the Same Roots,’ indicating that the boundary between medicine and food was significantly blurred. Ordinary people who had less access to the benefits of medical care utilized food or herb medicines for minor diseases. Modern knowledge about Korean medicine has been regarded as a specialized field to be handled by medical personnel. However, thanks to the previously mentioned tradition, modern people have high interest in ‘Food Cures’ (to treat diseases with food or simple herb medicine), and knowledge about folk remedies is now widely spread. But, sometimes, inaccurate information on these topics can cause a deterioration in health. Therefore, the medicine to be used for treatment should be based on an expert’s diagnosis. Because of the high public interest, it’s necessary to provide accurate specialized knowledge. However, most specialized knowledge is available through the professional literature or papers. Considering that the knowledge is intended to be used by the general public, it seems important to ensure easy access to the knowledge.

Against this backdrop, Korea Institute of Oriental Medicine (KIOM) plans to create a knowledge portal in Korean medicine, a portion of which will be used to offer knowledge of Korean medicine to ordinary people. The first step is to build Korean medicine knowledge content.

2. Building content for knowledge in herb medicine

The main data to be utilized for building this knowledge content includes the Korean medicine ontology established by the KIOM[1]. The Korean medicine ontology refers to the one established using professional data, such as medicine, prescriptions, acupoints, and disease symptoms, based on authorized Korean medicine textbooks[2,3,4]. The herb medicine ontology is linked to information related to an herb, including its chief virtue, efficacy, side effects, and property & taste. The following picture shows the intended architecture.



Even if the authorized specialized knowledge available from the herb ontology serves its role as an accurate provider of information, ordinary people may have difficulties using it. With this in mind, 『Donguibogam (Principles & Practice of Eastern Medicine)』 is to be utilized as a reference. The Donguibogam is mainly divided into five chapters, dealing with 「Naekyoung (Inner Body)」, 「Oihyung (External Appearance)」, 「Jobbyung (Various Diseases)」, 「Tangaek (Collecting and Prescribing Natural Medicines)」, and 「Chimgu (Acupuncture)」. Particularly, 「Naekyoung (Inner Body)」, 「Oihyung (External Appearance)」, and 「Jobbyung (Various Diseases)」 cover the physiological and pathological aspects of Korean medicine. Also, at the end of the description on each disease, sub-chapters called ‘Danbang (Single Formula)’ have been added, giving information about the single herb that should be applied for each disease. Additionally, 「Tangaek (Collecting and Prescribing Natural Medicines)」 contains information about herb producing areas and picking seasons, as well as efficacy and chief virtue. 『Donguibogam』 was designed to help the public who had no access to decent medical care to easily

use the medical encyclopedia. Thus, it is currently planned to improve the herb medicine ontology with information about herbs from 『Donguibogam』, consequently enhancing the availability of this knowledge among the public.


While it includes key content, old document-based information is seldom used directly in modern medical science. However, new drug development and clinical testing are being actively conducted by applying knowledge of medical herbs based on those old literatures. Hence, there are plans to collect and analyze theses which conducted experiments with medical herbs, and then add such content for knowledge in the specified medical efficacies of herb medicine. Providing the latest verified knowledge to the general public seems to be in line with the intention of ‘building contents for knowledge in herb medicine.’

The Korean medicine ontology is about both specialized knowledge about Korean medicine, and information about the literature. The ontology contains information based on old documents on Korean medicine, and the general public has difficulties in understanding some parts of it. In particular, they use terms related to illness, symptoms and efficacy that are often not used widely. Thus, such information will be translated and provided after the contents previously mentioned are gathered together. It’s especially important to note, the explanatory translation will be done from the point of view of the general public, not of the scholars.

황기(黃芪)

Astragalus membranaceus var. *mongolicus* Bunge

甘板麻 支那 藍粉 藍粉 藍粉 補骨 補骨 補骨 補骨 補骨 補骨 補骨 補骨 補骨 補骨 補骨 補骨
百燕絲 艾草 羊肉 王孫 箭芪 箭芪 蜀脂 煙脂 麗州黃耆 黃耆



황기는 맛을 달고 기운이 있다. 황기는 가늘고 긴 원주형을 이루고 길이 30-100cm, 지름 7-20mm이며 드문드문 작은 가지뿌리가 붙어있으나 분리되는 일은 없고 근두부 가까이에서는 약간 꼬여지고 줄기의 잔기가 남아 있다. 바깥면은 옅은 회황색-옅은 황갈색이며 회갈색의 코르크층이 때때로 군데군데 남아 있고 불규칙한 거친 세로의 주름과 가로로 피복 같은 모양이 보인다. 질은 치밀하고 껍기 짙으며 껍은 면은 섬유성이다.

체표의 기운을 굳건히 하고, 독소를 밀어내며, 새 살이 돋게 하고, 수액을 잘 통하게 하여 종기를 치료한다. 강장, 지한, 이완, 이뇨 등의 효과가 있다고 알려져 있다.

잘 아물지 않은 종기나 상처를 치료하고, 식은밥을 줄리는 데에도 사용하며, 몸이 허약하여 생긴 팔다리의 저림에도 활용한다. 약리학적으로 신염, 당뇨병, 고혈압, 간경화, 암 등의 치료에 응용하는 것으로 알려져 있다.

종기를 치료할 때에는 생것으로 진하게 달여먹는 것이 좋고, 식은밥이나 몸이 허약한 상태를 개선할 때에는 꿀물에 푼아서 달여먹는 것이 좋다. 삼색이 희고 살이 켈는데 땀이 많은 사람에게는 좋지만, 삼색이 어둡고 기가 실한 사람에게는 쓰지 않아야 한다. 황기를 고를 때에는 투명현라 같이 부드럽고 화살같이 갈록한 것이 좋다.

ME甘 M補

EP益衛固表 EP托毒 EP生肌 EP利水消腫

Q LW, Yu QT, Li P, Li SL, Wang YX, Sheng LH, Yi L.
Quality evaluation of Radix Astragalii through a simultaneous determination of six major active

TT補肺 TT補虛不損 TT遺久不敵 TT自汗 TT盜汗 TT血虛

Q LW, Yu QT, Li P, Li SL, Wang YX, Sheng LH, Yi L.
Quality evaluation of Radix Astragalii through a simultaneous

治癰疽 久敗瘡, 排膿止痛, 遷熱脈之. 《東醫寶鑑·雜病·脈方》

補虛勞 虛不受, 能瀉虛火. 創 瀉水炒, 煎服 《東醫寶鑑·雜病·虛勞·單方》

肥白人多汗者, 脈之有功. 霍亂入氣脈者, 不可服. 《東醫寶鑑·湯液·草部》

濕軟能幹者, 佳. 《東醫寶鑑·湯液·草部》

3. Conclusions

The authorized professional knowledge, highly-usable literature knowledge and latest knowledge based on verification by modern science will be utilized to build content for knowledge in herb medicine and additionally, to translate that content for better understanding by the public. Also, the content for knowledge in herb medicine will be loaded on a knowledge portal in Korean medicine with the aim of increasing accessibility to relevant information. The information on herb medicine will satisfy the public’s demand for herb medicine knowledge, and moreover, contribute to improving the public health.

4. References

- [1] Jang H, Kim J, Kim SK, Kim C, Bae SH, Kim A, Eom DM, Song MY, “Ontology for medicinal materials based on traditional Korean medicine”, *Bioinformatics*, 26(18), 2010, pp.2359-60
- [2] Joint Text Compilation Committee, *Bonchohak*, Younglimsa, Seoul, 2004.
- [3] Kilgu Shin, *Sinssibonchohak*, Soo Moon Publishing, Seoul, 1973.
- [4] Mingyo Shin, *Imsangbonchohak*, Younglimsa, Seoul, 1997.

5. Acknowledgement

This research was supported by the Korea Institute of Oriental Medicine (KIOM), under the “Construction of Knowledge portal in Korean medicine” project, grants K14092