

## Adverse events of folk medicine through the internet news articles

Jeong Hwan Park\*, Sujeong Moon\*, Sungha Kim\*\*\*, EunKyung Bae\*, Sanghun Lee\*

\*Medical Research Division, Korean Institute of Oriental Medicine, Korea

\*\*University of Science & Technology-Korea Institute of Oriental Medicine, Korea

### 1. Introduction

Folk medicine is traditionally passed down to treat disease. Folk medicine is popular and widely used in Korea. More than 70 % of Korean had experiences to use folk medicine [1].

Adverse events (AEs) of folk medicine are any unfavorable and unintended discomforts temporally associated with the use of folk medicine. In one study, folk medicine was used most frequently by patients being treated at the university hospital, with AEs associated with the use of folk medicine reported as 23.9% of all AEs by drug interaction [2]. The information of folk medicine actively interacted and spread widely on internet. So, misuse and abuse could be happened without any guidance of health professionals.

The aim of this study was to analyze the types and frequency of AEs related to folk medicine through news articles found on internet.

### 2. Materials and methods

We analyzed all articles on the topic of folk medicine and its AEs on the top 3 Korean online news websites (NAVER, DAUM, and NATE) determined by InternetTrend™ (www.internettrend.co.kr), in the last five years (between January 1, 2009 and February 28, 2014). Searching was primarily conducted with the keyword “folk medicine” and “Aes.” These terms were combined with “death, toxicity, acupuncture, moxibustion, bee sting therapy, cupping therapy, dictamnus, aconitum, poisoning, atopy, vinegar, alum, unlicensed, unauthorized, unqualified, and accident” All news articles were read by reviewers who extracted data from the articles according to predefined criteria, including basic demographic data of the patients (age, gender etc.), type of folk medicine, practitioner type, Aes type, purpose or indication, and possible explanation. We also determined serious adverse events (SAEs) caused by folk medicine

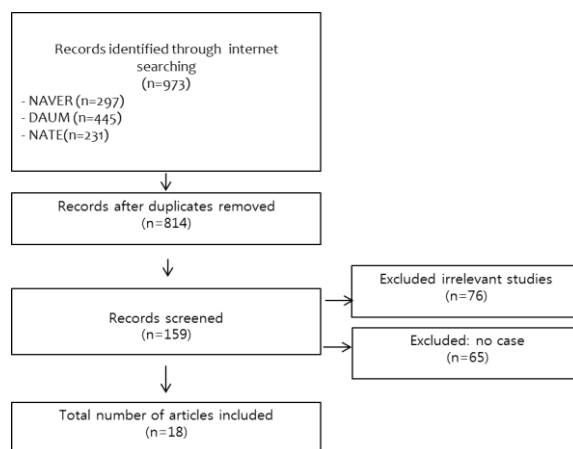


Figure 1. Flow chart of the study selection process

### 3. Results

Of the 973 news articles reviewed, 18 AE-related articles met our inclusion criteria (Figure 1). A total of 27 people experienced AEs associated with the use of folk medicine. Further, Aes were reported in both men and women, aged from 4 months to 76 years. Folk medicine practices that caused two or more Aes were use of toxic herbs belonging to the *Dictamnus* or *Aconitum* genus, vinegar therapy of the skin, and cupping or bee venom therapy performed by practitioners. Death, one of the SAEs, was reported in 11 people, out of which 10 died after treatment by an unqualified practitioner (Table 1).

[Table 1] Cases of adverse events directly related to folk remedy

Serial No. (year)	Patient age, gender	No. (patient)	Folk remedy or materials	Practitioner type	Purpose or indication	Adverse events	Possible explanation*
1(2009)	18, F	1	Hand acupuncture, cupping therapy	u.p	Obesity	Dyspnea, death	Unclear
2(2009)	6, M	1	Red ginseng	Mother	Immunologic adjuvant	Severe pruritus with atopic dermatitis	Unclear
3(2009)	60 elderly, F	1	<i>Dictamnus</i> powder	Self	Health promotion	Dyspepsia, jaundice, toxic hepatitis	Hepatotoxicity

4(2010)	C1- 63 C2- C6- n. r	6	C1-C6- medicinal wine of containing <i>Aconitum</i>	Neighbor	n. r	Decreased consciousness, vomiting	Aconitum Intoxication
5(2010)	Child, F	1	Vinegar therapy+	Mother	Atopic dermatitis	Symptom exacerbation	Bacterial infection
6(2010)	48, M	1	<i>Dictamnus</i>	Self	Health promotion	Jaundice, toxic hepatitis, fulminant hepatic failure	Hepatotoxicity
7(2011)	1, M	1	Cupping therapy	u.p	Atopic dermatitis	Hemorrhage , death	Shock
8(2011)	56, F	1	<i>Dictamnus</i>	Self	Skin disorder of unknown origin	Jaundice, toxic hepatitis	Hepatotoxicity
9(2011)	C1- 22 C2- 24	2	C1- apply loess on lesion area C2- vinegar therapy etc.	Self	Atopic dermatitis	C1- severe pruritus C2- Symptom exacerbation	C1- pruritus by contact C2- unclear
10(2012)	M	1	Swellfish spawn	Self	Atopic dermatitis	Dyspnea	Tetradotoxin poisoning
11(2012)	56	1	Bee sting therapy	u.p	Pain of shoulder	Coma	Anaphylaxis
12(2012)	65, F	1	Bee sting therapy	u.p	Pain of knee	Generalized edema , low blood pressure , coma, death	Anaphylaxis
13(2012)	63	1	Acupuncture, moxibustion, cupping therapy	u.p	Rectal cancer	Death	Unclear
14(2012)	C1- M C2- M	2	C1- rusty acupuncture C2- moxibustion	u.p	n. r	C1- tetanus, general paresis, death C2- burns	C1- unclear C2- burns
15(2012)	66, F	1	Cupping therapy	u.p	n. r	Dyspnea , death	Shock
16(2012)	76	1	<i>Aconitum</i>	Self	Neuralgia	Death	Aconitum intoxication
17(2013)	C1- 50, F C2- 44 C3- 53	3	Injection of unknown herbal medicine	u.p	C1- ovarian cancer C2- lung cancer C3- liver cancer	C1- death C2- death C3- death	Unclear
18(2014)	49	1	Bee sting therapy	u.p	Arthralgia	Dizziness, death	Anaphylaxis

C : case , n.r : not reported,u.p:unqualified person,+ Vinegar therapy: apply mixture of alum and vinegar on wound,\* As judged by the present author

#### 4. Discussion

In conclusion, analyzing the internet news articles is as follows. First, AEs was occurred after using of medicinal herbs with toxicity such as *Dictamnus.Aconitum* and alum.*Aconitum*,one of the ‘toxic medicinal herbs’ controlled by pharmaceutical law, was distributed illegal at market and peoplepurchased and used it easily without prescription of doctor.Second, folk medicine-associated AEsalso occurred byparents and neighborswho recommended their family and other neighbors without safety precaution. Third, it seems that SAE such as death occurred after excessively practice by unqualified person, despiteoriental medicine doctor have to practices acupuncture, moxibustion, cupping therapy, and bee venom therapy [3]. All of these will fully prevent if it is performed monitoring of folk medicine-associated AEs.

As an aspect of the health care system, we suggest the government and medical community need to establish a system for the reporting, monitoring, and management of folk medicine-associated AEs.

#### 5. References

- [1] Baek, S. M., Choi, S. M., Seo, H. J., Kim, S. G., Jeong, J. H., Lee, M., Park, J. H., Moon, S. J., Lee, S. H., 2013. Use of Complementary and Alternative Medicine performed by self or non-institutional therapists in South Korea: a community-based survey. *Integrative Medicine Research* 2, 25-31.
- [2] Yoo, T. W., Kim, B. I., Kim, J. B., Kim, D. J., Kim, J. W., Baik, S. K., Kim, K. S., Cheon, G. J., 2007. The survey for the actual condition of drug medication and development of health care cost associated with toxic liver injury in Korean: a multicenter study for the detection and the development of nationwide reporting system of toxic liver injury. *The Korean Journal of Hepatology* 13, 34-43.
- [3] Kim KH, Kim TH, Hwangbo M, Yang GY. 2012. Anaemia and skin pigmentationafter excessive cupping therapy by an unqualified therapist in Korea: a casereport. *Acupuncture in Medicine* 30, 227-8.