LETTER TO THE EDITOR

Author response to “Increased risks of upper tract urothelial carcinoma in male and female Chinese herbalists”

Dear Editor,

Renal failure and urothelial carcinoma (UC) caused by taking Chinese herbs containing aristolochic acids (AAs) is an important epidemic in Taiwan that has attracted global attention to the hazards of AAs. AAs are derived from extracts of the Aristolochia species and are a common ingredient in many Chinese herbs. Taiwan has the highest incidence of renal failure in the world, and Chinese herbal remedies containing AAs are suspected of being primarily responsible for this increased risk. A longitudinal study using the 1997–2002 Taiwan National Health Insurance reimbursement database found that people taking AA-containing herbal products had an increased risk of UC.1

By analyzing aristolactam–DNA adducts and TP53 mutation spectra, Chen et al demonstrated that a high proportion of upper tract UC in Taiwan resulted from AA exposure.2 Herbal remedies containing AA have now been categorized as proven Group 1 human carcinogens. The latency of AA-associated UC ranges between 3 and 5 years depending on the cumulative dose of AA. In Taiwan, most AA-containing herbs have been prohibited since 2003. Although we would watch carefully when the decreasing trend of UC incidence rate occurs, it does not necessarily mean we are able to estimate accurately the latency period of AA-associated UC. Instead, it represents the induction time for prevention to be effective, and we shall be able to estimate the expected number of prevented cases.3

The epidemic of UC in patients taking AA-containing herbs has been clearly described; however, health risks to workers in contact with AA-containing herbs was unknown until sequential studies were conducted using a nationwide occupational cohort of Chinese herbalists potentially exposed to AA-containing herbs at work. Yang et al found that Chinese herbalists had a significantly higher risk of renal failure, upper urinary tract UC, and bladder cancer.4,5 Using a nested case–control study design in a cohort of Chinese herbalists for whom individual AA exposure history was known, occupational contact with the AA-containing herb fangji was shown to increase the risk of renal failure and UC.6,7 In 2007, a survey of Chinese herbalists showed that AAs were detectable in 19% of participants.8 These findings in Chinese herbalists have strong implications for herbal drug safety and occupational health. In contrast to western countries, Chinese medicine is regarded as a formal medical service and there are many workers engaged in the industry. In 2013, the Taiwan Environmental and Occupational Medicine Association proposed that workers exposed to AAs at work who develop renal failure and UC could be identified as having an occupational disease. Based on sound epidemiological evidence, the Taiwan Council of Labor Affairs is now considering including AA-induced renal failure and UC as legally regulated occupational diseases. In clinical practice, every physician must think about the possible consumption of or contact with AA-containing herbs when treating a patient with renal disease or UC.

References


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