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**Toxicological aspects of aconite alkaloids in decoction by using a microwave oven**

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We have previously reported that some Kampo medicines such as Kakkonto could be decocted by using a microwave oven at the condition of 500W for 30 min instead of the conventional method.

In this study, we investigated toxic components in decoction of Keishikabushito by using a microwave oven to confirm the safety of this method. We decocted a daily dose of Keishikabushito containing 1 g of processed Aconite root (Bushi) by a microwave oven in 600mL water at 500W for 30 min and the conventional decoction device in 500mL water at 600W for 40 min, respectively. The contents of toxic components from Bushi (aconitine, mesaconitine, hypaconitine), and three other effective as well as toxic components (benzoylaconine, benzoylmesaconine, benzoylhypaconine), the hydrolysates of the three toxic components in heating process, were analyzed with HPLC method.

In both decoctions obtained by these methods, toxic components such as aconitine, mesaconitine and hypaconitine couldn’t be observed because of hydrolysis in heating process. Benzoylaconine, also not observed, may be further hydrolyzed. The contents of benzoylmesaconine and benzoylhypaconine were 0.68±0.06 mg, 4.75±0.15 mg in decoction decocted by a microwave oven, and 0.70±0.01 mg, 4.89±0.12 mg in decoction decocted by the conventional method, respectively.

There was no significant difference of the contents of toxic components between two methods. Decocting Keishikabushito by using a microwave oven is as safe as the conventional method. In addition, the decoction time can be saved. This new decoction method may be applied widely.