

# Chinese Herbal Medicine for Constipation in Taiwan

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Constipation is subjectively defined by patients having strained passage of hard, infrequent and incomplete stool leading to excessive time on the toilet. In Western countries, constipation is an extremely common outpatient complaint, with a prevalence of 2–27% in the adult population.<sup>1</sup> Constipation is predominantly a female condition (2–3:1 female-to-male ratio) that mainly affects the elderly and those of low socioeconomic status.<sup>2</sup> Constipation *per se* is neither life-threatening nor associated with serious complications; however, its impacts on society via direct medical expenses and indirect social costs, e.g. absenteeism, are significant. For example, constipation leads to 2.5 million doctor visits annually in the USA, and its tertiary care evaluation consumes US\$2,752 per patient.<sup>3</sup> Notably, only a minority of subjects with constipation seek health care in Western countries.<sup>2</sup> In addition to direct medical costs, those with chronic constipation in Western countries have high rates of work absenteeism,<sup>2</sup> and their quality of life is also severely impaired.<sup>2</sup> It has been estimated that at least 90% of patients suffering from chronic constipation do not seek medical advice, but use over-the-counter laxatives instead. However, many patients are dissatisfied with their treatment for chronic constipation because it lacks efficacy. Therefore, many patients in Western countries will seek help from complementary and alternative medicine.

In Taiwan, constipation affects approximately 8.5% of the population undergoing a routine checkup.<sup>4</sup> Constipated subjects in Taiwan are also predominantly female and elderly. Constipation has a significant impact on work productivity, burdens the health care system and impairs sleep quality in Taiwan. However, unlike the lower consultation rates in the West, approximately 40% of constipated subjects are consulters, i.e. they would consult physicians for their constipation. It is thought that the nature of the health care system in Taiwan is a major factor determining health-seeking

behaviors of constipated subjects and the number of doctor consultations. A national health insurance (NHI) system was introduced in Taiwan in 1995. More than 95% of Taiwanese citizens have comprehensive medical insurance with relatively easy-to-access medical care. This is the most likely reason why many constipated subjects seek medical services for this complaint in Taiwan. The use of traditional Chinese medicine (TCM) is also reimbursed by the NHI, and all qualified residents in Taiwan are free to choose either a Western-trained or TCM doctor for their symptoms. The NHI provides comprehensive coverage, including outpatient/inpatient care, ambulatory care, laboratory tests, and prescription drugs. This means that the NHI will pay almost all the medical bills of covered Taiwan residents. Therefore, the NHI's medical data bank is the best source for analyzing medicoeconomic status in Taiwan.

In the July 2010 issue of the *Journal of the Chinese Medical Association*, Jong et al searched the NHI data bank, and extracted and analyzed data containing detailed prescriptions of Chinese herbal medicine (CHM) from the claim data of TCM in treating constipation in 2004.<sup>5</sup> They found that female patients outnumbered male patients by 3 to 1 in terms of using CHM for their constipation. As mentioned above, constipation is usually female-predominant, and therefore, this is not a surprising finding. Sex, or perhaps sex hormones in mediating gastrointestinal motility, may be related to this female predominance. For example, Hinds et al<sup>6</sup> demonstrated that males have a faster colonic transit time than females. With regard to sex hormones, male rats have faster gastric emptying and intestinal transit than female rats, whereas ovariectomized female rats have similar gastric emptying speeds to male rats.<sup>7</sup> In addition to the potential hormone or sex effect on the prevalence of constipation, females tend to use TCM more frequently than males in Taiwan and in Western countries.<sup>8</sup>



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In contrast to previous reports showing an increased prevalence of constipation with advancing age, the authors found that subjects aged between 20 and 29 years comprised the largest number of those treated (25%), followed by those aged between 30 and 39 years (19.6%). In addition, the female-to-male ratio was approximately 8:1 in both age groups. This unexpected result suggested that younger females tended to seek TCM not only more often than older females but also more often than males of similar age, which cannot be explained just by the higher prevalence of constipation in females. In a recent nationwide survey using NHI data (1996–2001) to establish the frequency of TCM use, females were also found to be higher frequency TCM users than males (female:male, 1.13:1), and the age distribution also displayed a peak at around the 30s, followed by the 20s and 40s. Previous studies have also shown that middle-aged females are characteristic TCM/CHM users in Western countries.<sup>9</sup> However, the underlying reason for this high rate of TCM/CHM use in younger females is still unclear. Further studies are required to explore the psychosocial background of this particular health-seeking behavior by young females in Taiwan.

In modern Western medicine, the therapy for chronic constipation is still unsatisfactory. Many CHMs have been used for the treatment of constipation. Jong et al<sup>5</sup> also identified the most commonly prescribed herbal formula and single herb for treating constipation in Taiwan. However, the efficacy of these CHMs cannot be evaluated. Although the authors have proposed the potential mechanisms for these CHMs in treating constipation, much of the supportive evidence is either preclinical data or speculation. Even though recent systematic reviews have shown the beneficial effect of CHMs, a definite conclusion cannot be made

due to the methodological flaws and heterogeneity among these studies.<sup>10</sup> Further high-quality, well-designed, randomized, double-blind, and placebo-controlled trials are needed to evaluate the efficacy and safety of CHMs in treating constipation.

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