

# Traditional Japanese (kampo) medicine yokukansan for behavioral and psychiatric symptoms of dementia in Alzheimer's disease

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## Opinion

Behavioral and psychiatric symptoms of dementia (BPSD) are among the most troubling symptoms in Alzheimer's disease (AD) patients. In 2005 and 2008, the Food Drug Administration reported that "antipsychotics are not indicated for the treatment of dementia-related psychosis." Yet, the available therapeutic options for AD patients with BPSD are few.<sup>1</sup>

In Japan, Kampo medicine provides clinicians and patients an alternative therapeutic option when modern medicine is ineffective. Kampo medicine Yokukansan (YKS) is gaining popularity as a clinical treatment for BPSD in Japan. YKS is typically used in conjunction with acetylcholinesterase inhibitors or NMDA receptor antagonists, which are used to treat the core symptoms of AD.<sup>2</sup>

Although most forms of Kampo medicine lack sufficient evidence, YKS is an exception, and multiple clinical studies have been performed. Previous clinical studies of YKS have reported its efficacy as a BPSD treatment. Iwasaki et al. found that several BPSD symptoms, including aggression, agitation, and irritability, improved with YKS in patients with mild to severe dementia including AD.<sup>3</sup> In addition, the efficacy of YKS was reported in a systematic review and meta-analysis.<sup>4</sup>

Studies of YKS are underway not only in clinical settings but also in fundamental pharmacology. Reportedly, transport of glutamate, gamma-aminobutyric acid (GABA), and serotonin may be associated with BPSD.<sup>5</sup> Several pharmacologic mechanisms of action have been recently described for YKS, including improved glutamate uptake, inhibition of glutamate-induced neuronal death, modulation of GABA receptor expression, and partial agonist effect on serotonin 5-HT 1A receptors.<sup>6-8</sup> The Japan Geriatrics Society Working Group recommend the use of YKS in AD patients with BPSD.<sup>9,10</sup> YKS uses Glycyrrhizae radix (licorice root); therefore, hypokalemia, hypertension, and edema are potential adverse effects and require monitoring.

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## Conflicts of interest

Author declares there are no conflicts of interest.

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