



Traditional Japanese medicine in geriatrics, evidences and the guideline

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Abstract: Japan has become an unprecedented super-aging society. The average life span of Japanese is 90 years. However, not everyone can stay healthy for life. Healthy life span is 10 years shorter than life span. Many spend an average of 10 years in need of care. In such a situation, what can traditional medicine do?

Keywords: Traditional Japanese medicine; elderly; geriatric medicine; dementia

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Geriatric syndrome

Geriatric syndromes include a number of conditions typical of, if not specific to, aging, such as dementia, depression, delirium, incontinence, vertigo, falls, spontaneous bone fractures, failure to thrive, and neglect and abuse. Geriatric syndromes are associated with reduced life expectancy. To be considered a geriatric syndrome, these conditions must interfere with a person's daily life.

Here, we introduce some evidences of traditional Chinese medicine for geriatric syndrome and clinical practice guideline from Japan Geriatrics Society. How can we treat geriatric syndrome using traditional Chinese Medicine?

Dementia

Despite a small sample size and a short observation period, we demonstrated that a combinatorial use of donepezil plus kamiuntanto, KUT was more beneficial than donepezil alone in both cognition and brain perfusion (*Figure 1*). Therefore, it is likely that donepezil and KUT worked synergistically in a safe fashion to enhance an availability of acetylcholine (1).

Sametime, we showed that bawei dihuan wang (BDW) could improve the cognitive function of Alzheimer disease patient. *Figure 2* shows that BDW improves Mini Mental Score Examination about 2.5 in the treatment period (2).

Traditional Chinese medicine for behavioral and psychological symptoms of dementia (BPSD)

BPSD is the serious clinical problem of geriatric syndrome. We reported that Yigan San could improve BPSD without extrapyramidal side effects causing by major tranquilizers (*Figure 3*) (3). At the same time, we also found that Yigan San could improve typical hallucination in Dementia with Lewy Bodies (DLB), as shown in *Figure 4* (4).

Aspiration pneumonia

Pneumonia is now the third reason of death of Japanese, and most of them are aspiration pneumonia in the elderly. Absence or attenuation of the cough (5) and swallowing (6) reflex is shown in elderly patients with aspiration pneumonia. We investigated the effects of a traditional Chinese medicine Banxia Houpo Tang (BHT, Hange Koboku-To in Japanese, formula magnolia et pinelliae), on the swallowing (7) (*Figure 5*) and cough (8) (*Figure 6*) reflexes in elderly stroke patients. Finally, we found that BHT reduced pneumonia risk in the elderly (*Figure 7*) (9). The BHT group was able to maintain self-feeding better than the control group (P=0.006).

Chronic constipation

There were over 1.34 million patients suffering from

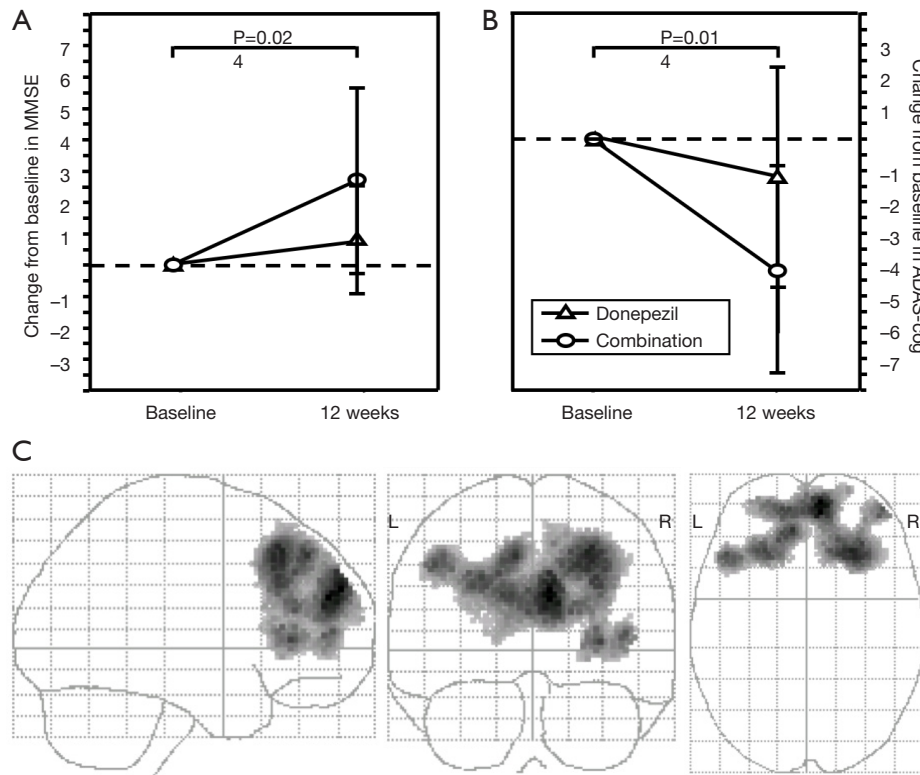


Figure 1 The effects of Kami Unman to on cognition of Alzheimer's disease patients. (A,B) Significant improvement of cognition (MMSE and ADAS-cog) was shown in combination group; (C) brain area where significant improvement of blood flow shown in the combination therapy group.

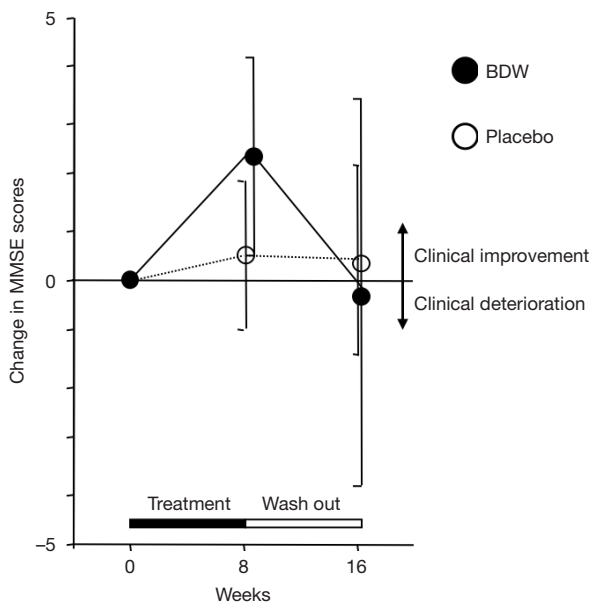
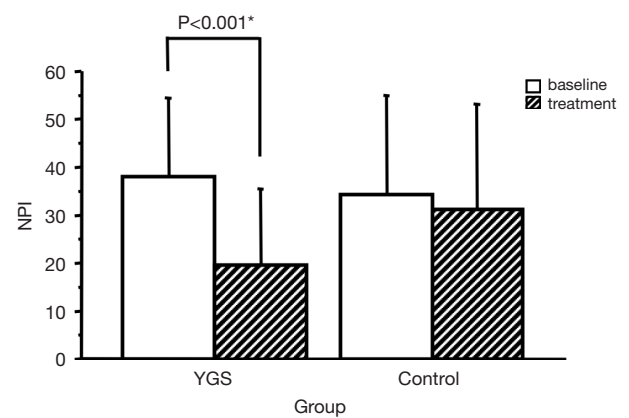


Figure 2 MMSE change with BDW treatment. MMSE improved about 2.5 points in the treatment period and placebo showed no significant change. BDW, bawei dihan wang.



*NPI score shows that BPSD significantly improved in Yigan San group.

Figure 3 NPI (BPSD score) reduced into the half after 4 weeks YGS (Yigan San) therapy. In control, no significant change.

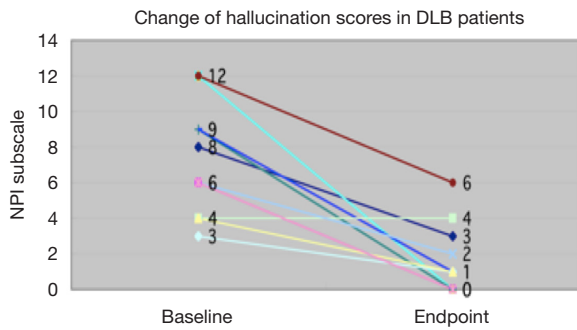


Figure 4 NPI subscale of hallucination significantly improved with YGS in DLB patients. DLB, Dementia with Lewy Bodies.

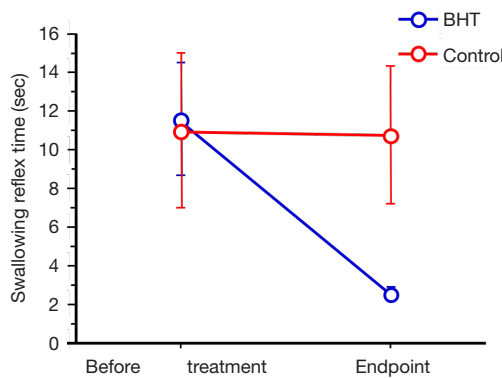


Figure 5 Four weeks BHT treatment significantly improved swallowing reflex time. BHT, Banxia Houpo Tang.

cerebrovascular diseases in 2008 reported by Ministry of Health, Labour and Welfare in Japan. Constipation is one of the complications seen in poststroke patients (10). Japanese medicine Daikenchuto (DKT) improved chronic constipation of poststroke patients. Poststroke patients with functional constipation, assessed by the Rome III criteria, from 6 hospitals were recruited in a study on the effects of the traditional Japanese medicine Daikenchuto (DKT) on constipation. The total score on the Constipation Scoring System (CSS) improved significantly by DKT (Figure 8). The Gas volume score was also significantly reduced in the DKT group compared to the control (Figure 9, P=0.03) (11).

Guideline

Concerning these evidences, Japan Geriatric Society treated traditional medicine as the independent chapter in their

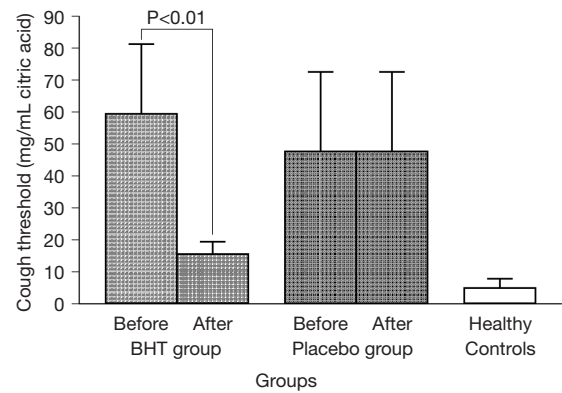


Figure 6 BHT treatment significantly improved cough reflex threshold. BHT, Banxia Houpo Tang.

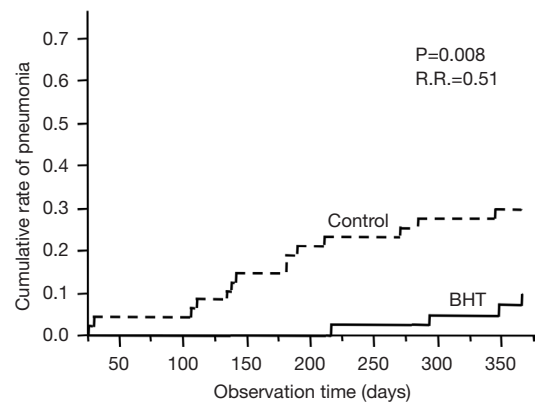


Figure 7 BHT significantly reduced the pneumonia onset. BHT, Banxia Houpo Tang.

guideline 2015 (12). As a result, Yigan San, Banxia houpu Tang, Dajianzhong Tang, Buzhongyiqi Tang, and Ma Zi Ren Wan covering by Japanese national insurance, were reviewed and found to have a high Quality of evidence for the elderly (Table 1).

Conclusions

As mentioned above, evidences of traditional medicine for geriatrics accumulated little by little, and a part of it is accepted modern medical doctors. But Japan lack of systematic educational system for traditional medicine, causing irrelevant usage. Nation wide systematic system of education, study, and medical care are required.

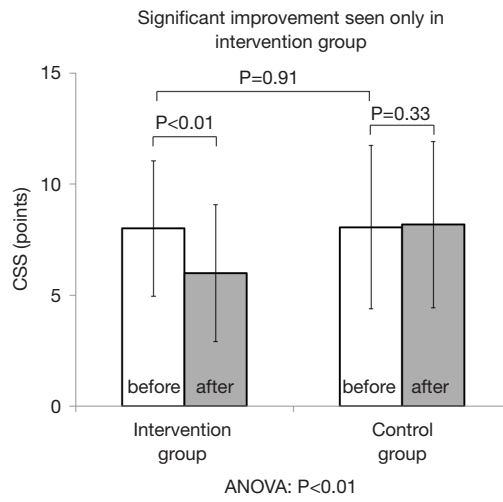


Figure 8 Changes in constipation scoring system, Constipation Scoring System (CSS). The total score on the CSS improved significantly by DKT.

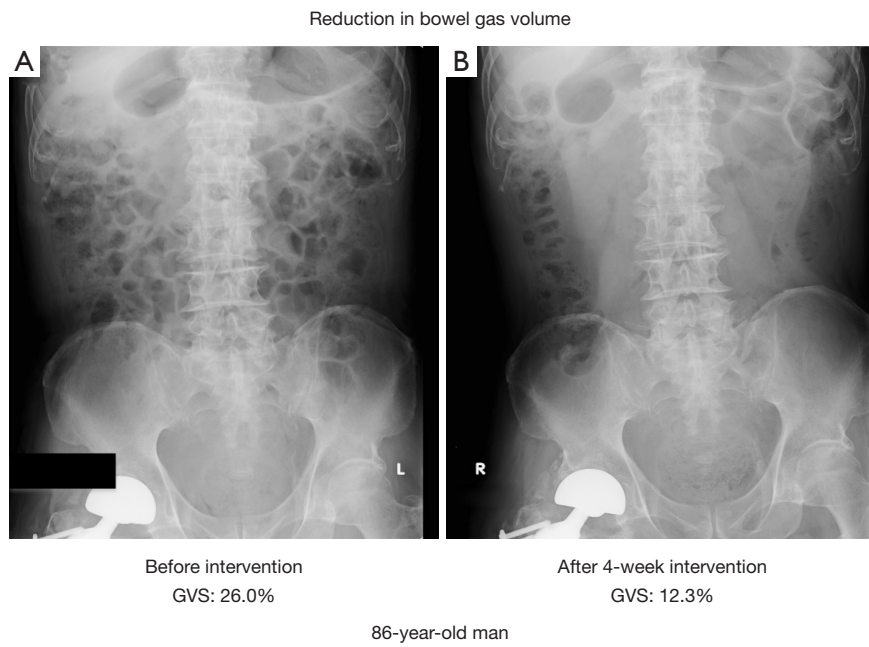


Figure 9 The gas volume score was also significantly reduced in the DKT group compared to the control.

Table 1 Traditional Chinese medicines recommended for the elderly in the guideline of Japan geriatric society

Medicines	Ingredients	Effects	Attention	QoE and RS
Yigan San (Chinese) Yokukansan (Japanese)	Atractylodis Lanceae Angelicae Radix Hoelen Bupleuri Radix Cnidii Rhizoma Glycyrrhizae Radix Uncariae Uncis Cum Ramulus	Yigan San improves the BPSD of dementia patients (AD, VD and DLB), and is particularly effective for DLB-related hallucinations.	Hypokalemia could occur in 6 % of cases	QoE: moderate RS: strong
Banxia houpu Tang (Chinese) Hangekobokuto (Japanese)	Pinelliae Tuber Perillae Herba Hoelen Zingiberis Rhizoma Magnoliae Cortex	Banxia houpu tang (BHT) reduced the aspiration pneumonia risk in elderly patients with dementia and maintained self-feeding.	None	QoE: moderate RS: strong
Dajianzhong Tang (Chinese) daikenchuto (Japanese)	Zingiberis Siccatum Rhizoma Zanthoxyli Fructus Panacis Ginseng Radix Maltose	Dajianzhong Tang is effective for defecation control in post-stroke patients.	Interstitial pneumonia, and, rarely, liver dysfunction	QoE: moderate RS: strong
Buzhongyiqi Tang (Chinese) hochuekkito (Japanese)	Astragali Radix Zizyphi Fructus Atractylodis Lanceae Aurantii Nobilis Pericarpium Panacis Ginseng Radix Glycyrrhizae Radix Angelicae Radix Cimicifugae Rhizoma Bupleuri Radix Zingiberis Rhizoma	Buzhongyiqi Tang improved systemic inflammation and nutritional status in patients with COPD	It contains licorice and may cause hypokalemia	QoE: low RS: weak
Ma Zi Ren Wan, (Chinese), mashiningan (Japanese) Hemp seed pill (HSP) (English)	Cannabis Fructus Armeniaca Semen Rhei Rhizoma Magnoliae Cortex Aurantii Fructus Immaturus Paeoniae Radix	HSP is safe and effective for alleviating functional constipation. According to the study in reference 31, those in the HSP group benefited in terms of increased complete spontaneous bowel movement, relief in the severity of constipation and straining, and an effective reduction in the use of rescue therapy when compared with placebo. HSP is safe and effective for alleviating functional constipation	HSP is a very safe purgative. No adverse events were reported	QoE: moderate RS: strong

Acknowledgments

None.

Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

Ethical Statement: The author is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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