

The use of aromatherapy in care of the elderly

Senile dementia with other common aging problems

Based on TCM energetics and research evidence

Introduction

There are few things in our life more devastating to self and family than the loss of memory. Senile dementia is a syndrome in the elderly characterized by impairment of memory and cognition. With the improvement of average life expectancy as a result of medical advances and better nutrition, the aged population has been fast increasing in recent years. Senile dementia has become a major problem of public health. Due to the deterioration of liver detoxification and kidney filtration, which is common in elderly people, there is a concern about the negative side effect in modern medication given to the elderly.

Along with the orthodox medicine for the age-related illnesses and problems, aromatherapy has been considered as one of the most effective and safe alternative treatments in the general care of the elderly in hospitals. Aromatherapy can play a significant role for the elderly to ease the common problems of aging such as stress, mood swings and memory issues as well as decreasing the need for medications and increasing the quality of life.

The complication of common problems of aging including senile dementia stems from individual life style and historical injuries or illnesses as well as genetic predisposition. By recognizing that there is not only one cause of senile dementia, the holistic approach towards the integrated problems of aging based on the knowledge of traditional Chinese medicine (TCM) energetics will result in successful treatment of aromatherapy, which will be acceptable to the wider practices.

Senile dementia

Dementia is a decline in memory and thinking, present for 6 months or more, which is of a degree sufficient to impair functioning in daily living. More than 50% of people with dementia experience a decline in emotional control, with behavioral and psychological symptoms (BPSD) which are distressing to both the patient and their carers. The most common cause of dementia is Alzheimer's disease (between 50% and 70% of all cases) It is a progressive, degenerative illness that attacks the brain. According to the Shirley Price and Len Price, the cost of dementia to the UK is twice that spent on cancer care, yet the amount spent on research into dementia is 12 times lower than that for cancer. ¹

It starts first the loss of the sense of time & date, then loss of the sense of location, and finally the loss of the sense of identity of others and self. Other common mental problems associated with dementia can be sleep disturbances, mood changes, anxiety, depression, aggression and restlessness, and sometimes hallucinations. There are also numerous physical symptoms that often appear with the mental ones.

Other Common aging problems

Insomnia:

Sleep complaints and disorders are frequent in geriatric patients, with a prevalence of 57%. They result in increased morbidity and mortality. Sleep disorders include sleep apnea syndrome, restless legs syndrome and periodic limb movements, which are the most frequent diagnoses in an elderly population. ²

Anxiety, Demotivated:

Generalized anxiety disorder (GAD) may be the most common mental disorder among the elderly. Anxiety can take many forms and have many causes, due to loss of mobility and independence, fear over finances, gradual deterioration in health or the decline of a loved one. ¹ Loss of motivation and frontal dysfunction are frequent in old people. Motivation refers to what drives acts and relationships. The loss of motivation has some specific characteristics from depression: loss of sense of meaning, loss of commitment for others, disinterest for daily activities. The frontal function is related to speed of acting, emotional system, anticipating of the future. All these points are altered in demotivated patients. ³

Constipation:

It is common for elderly because the intestines lose their muscle tone and because of less physical exercise. ⁴ Many elderly people do not drink enough water, which can contribute to constipation.¹

Research evidence

- A cross-over randomized trial. Seventy Chinese older adults with dementia were recruited; half were randomly assigned to the active group (lavender inhalation) for three weeks and then switched to control group (sunflower inhalation) for another three weeks; the other half did the opposite. Clinical response was evaluated using the Chinese versions of Cohen-Mansfield Agitation Inventory (CCMAI) and Neuropsychiatric Inventory (CNPI). Lavender is effective as an adjunctive therapy in alleviating agitated behaviors in Chinese patients with dementia. In a patient population particularly vulnerable to side effects of psychotropic medications, aromatherapy using lavender may offer an alternative option. ⁵
- A placebo controlled trial with blinded observer rater. Fifteen patients meeting ICD-10 diagnostic criteria for severe dementia and suffering from agitated behaviour defined as a minimum score of three points on the Pittsburgh Agitation Scale (PAS). A 2% lavender oil aromatherapy stream was administered on the ward for a two hour period alternated with placebo (water) every other day for a total of ten treatment sessions. Lavender oil administered in an aroma stream shows modest efficacy in the treatment of agitated behaviour in patients with severe dementia. ⁶
- Lavender, Sweet Orange, Grapefruit, Tea Tree essential oil were used for 15 patients (12 female, 3 male at the age between 67 to 99 years old) who suffer sleep disturbance and loss of willingness in Hibino Hospital in Japan. The result shows that Lavender is remarkably effective for sleep disturbance, on the other hand, other essential oils are not effective for loss of willingness in the short term. The report suggests that aromatherapy has a possibility to be an alternative therapy in the treatment of old people with sleep disturbance. No side effect has been observed so far. ⁷
- This study for 10 day, employed a randomized control group pretest-posttest design. The experimental group received abdominal massage using essential oils with Rosemary, Lemon, and Peppermint, and the control group received a placebo massage. To evaluate the effect of aromatherapy, the degree of constipation was measured using the CAS(constipation assessment scale) and the number of bowel movements per week. Data was analyzed by repeated measures of ANOVA using the SPSS program. The score of CAS of the experimental group was significantly lower than that of the control group. In addition the average number of bowel movements in the experimental group was higher than that of the control group. The effect of aromatherapy lasted 2 weeks after treatment, while the placebo effect lasted 7-10 days after treatment. The finding of this study showed that aromatherapy helps relieve constipation in the elderly. ⁸
- Many of the memory enhancing drugs currently used in the treatment of Alzheimer's disease are designed to inhibit cholinesterase, the enzyme which breaks down acetylcholine in the body. Acetylcholine is vital to the central nervous system; it acts as a neuromodulator and when there is damage to the cholinergic (acetylcholine-producing) system it affects memory, REM sleep,

attention and sensory perceptions. Lemon, Rosemary and Spanish Sage have been shown to act in a similar way to conventional drugs, inhibiting cholinesterase but without any negative side effects. It has also been shown that using these essential oils in their natural state vs. isolating chemical constituents has a greater effect on preventing the breakdown of acetylcholine. 9, 10

- This study investigated the effects of aromatherapy massage on the anxiety and self-esteem experienced by Korean elderly women. A quasi-experimental, control group, pretest-posttest design was used. The subjects comprised 36 elderly females: 16 in the experimental group and 20 in the control group. Aromatherapy massage using lavender, chamomile, rosemary, and lemon was given to the experimental group only. Each massage session lasted 20 min, and was performed 3 times per week for two 3-week periods with an intervening 1-week break. The intervention produced significant differences in the anxiety and self-esteem and no significant differences in blood pressure or pulse rate between the two groups. These results suggest that aromatherapy massage exerts positive effects on anxiety and self-esteem. 11

Pathology of elderly in TCM

According to TCM, the deterioration in the human body starts from the function of Liver at the age between 40s and 50s, and then, proceeds to Heart, Spleen, Lung, and finally Kidneys. The principle idea of TCM is 'prevention' before a disease occurs. In order to prevent the progress of age related problems in the later stage of life, to start a self care as early as the age of 40s or 50s is the common practice in TCM as an early intervention.

TCM ascribes aging itself, and many of the diseases that accompany it, primarily to deficiency and decline, especially of the kidneys and spleen. The general pathology of the elderly is regarded as Qi deficiency and the loss of regulation & harmony of Qi and Blood described as follows:

Original Qi (essence) becomes deficient in Kidneys (Water element) as we get older. Qi deficiency in Kidneys affects Liver (Wood element) to regulate the flow of Qi, then leads to Qi stagnation and Blood deficiency in Liver. Liver-Qi Stagnation affects the other organs, such as Stomach (Earth element) and Large intestines (Metal element), which leads to abdominal distention, flatulence and constipation. Liver-Qi Stagnation also causes the stagnation of Blood and affects Heart (Fire element) that governs the blood, thus leading to palpitations and insomnia.

Qi deficiency in Spleen affects the transformative and transportive functions of the Qi which leads to the Qi stagnation results in spasm, constriction, distention and pain. Qi deficiency in Spleen also affects the production of blood in Spleen, which leads to the deficient blood results in poor vision, poor memory, insomnia, anxiety and depression.

Each individual is a mixture of all five elemental energies and processes. Imbalance occurs in five elements when one or two elements become afflicted. TCM energetics enable us to employ the holistic approach towards dementia integrated with the other common aging problems of the human senility.

Senile dementia and other common aging problems in TCM

According to TCM, senile dementia occurs due to the shortage of both Qi and Blood in brain. This happens with the mixture of the followings:

- Original Qi (essence) Deficiency in Kidneys due to the aging
- Spleen-Qi deficiency due to the disharmony of the function in Spleen caused by the excess of worrying and overthinking
- Heart / Kidneys imbalance due to the insufficient Qi & Blood in Liver to nourish the Heart leads to the dysfunction of Heart, which is controlling the blood vessels
- Poor transformation of body fluids & Qi by Spleen causing Phlegm due to the unhealthy eating & drinking habits including excess consumption of foods, the lack of exercises and heavy smoking habit
- Qi Stagnant & Deficiency leads to the Stagnant Blood

The other common aging problems occurs due to the followings:

- GAD: Wood & Fire disharmony with Liver-Qi & Heart-Qi stagnation
- Constipation: Liver-Qi stagnation, Qi stagnation in Large intestines, Blood deficiency in Liver
- Insomnia: Liver-Qi stagnation, Heart-Blood (& Spleen-Blood) deficiency

Since the dysfunction of five elements in senescence overlap each other, the main problems in the elderly can be summarized as follows:

1. Deficiency in Kidney-Qi & Spleen Qi
2. Qi stagnation in Liver & Heart
3. Stagnation in Spleen affecting Lung, Large intestines and Liver (Blood deficiency)
4. Heart-Blood deficiency

1. Senile dementia involving Deficiency in Kidney-Qi & Spleen Qi

Signs and symptoms:

Lethargy, poor stamina and endurance. It also reduces the production of cerebral marrow, leading to the various symptoms of dementia such as headache, dizziness, amnesia, and retard response. The tongue may be pale, and slightly swollen.

Indicated essential oils:

General restorative, nervous restorative-relaxant and nervous relaxant, nervous stimulant-restorative that strengthening the Qi in Kidneys, and support & tonifies the Spleen-Qi, clarifies and revitalized the Intellect. Anxiolytic, immunostimulant, calming in action.

Example essential oil formula:

Cedrus atlantica (Atlas Ceder)	40%
Citrus limonum (Lemon)	30%
Elettaria cardamomum (Cardamon)	20%
Vetiveria zizanoides (Vetiver)	10%

Supporting research evidence:

Cedrus atlantica is especially effective in comforting and calming the stressed and nervous mind and also relieving anxiety.¹² Components of lemon essential oil (Citrus limonum) attenuate dementia induced by scopolamine.¹³ Elettaria cardamomun has been described as an effective aid for headache relief, and a gentle tonic for the nervous system. It is also recommended for nervous exhaustion and depression because it has the dual ability to calm and sooth during phases of nervous tension, and enhance concentration during periods of sluggishness.¹⁴ Antioxidant activity is found in Vetiveria zizanoides.¹⁵

2. Senile dementia involving Qi stagnation in Liver & Heart

Signs and symptoms:

GAD, depression, restlessness, a sense of dread, difficulty concentrating, irritability, palpitations, muscle aches and tension, trembling or shaking, shortness of breath, insomnia. The tongue may be slightly purple and swollen with red on the side.

Indicated essential oils:

Harmonize the emotions to regulating Qi, general-neurocardiac stimulant-restorative to tonifies and regulates Heart-Qi. Nervous relaxant, anxiolytic, antidepressant in action.

Example essential oil formula:

Lavandula angustifolia (True Lavender)	30%
Citrus aurantium ssp. bergamia (Bergamot)	30%
Citrus sinensis (Sweet Orange)	20%
Rosmarinus officinalis ct. cineole (Rosemary)	20%

Supporting research evidence:

Main components of *Lavandula angustifolia*, linalyl acetate (LA) works synergistically with linalool (LO) and that the presence of both LA and LO is essential for the whole oil to work as an inhaled anti-anxiety agent.¹⁶ *Citrus aurantium ssp. bergamia* exhibited anxiolytic-like behaviours to reduce the stress.¹⁷ An acute anxiolytic activity of sweet orange aroma, giving some scientific support to its use as a tranquilizer by aromatherapists.¹⁸ Both *Lavandula angustifolia* and *Rosmarinus officinalis ct. cineole* can produce objective effects on cognitive performance, as well as subjective effects on mood.¹⁹

3. Senile problems involving Qi stagnation in Large Intestines, Blood deficiency in Liver

Signs and symptoms:

Constipation, abdominal distention, flatulence, nervous tension, infrequent bowel movements, dizziness, poor vision, dry eyes, insomnia, poor memory. The tongue might be dull pale in colour.

Indicated essential oils:

Digestion stimulating oils, gastrointestinal spasmolytic-digestive to regulate Qi in Liver, Stomach and Large Intestines, and ease tension, harmonizes the Ethereal Soul.

Example essential oil formula:

Citrus limonum (Lemon)	40%
Elettaria cardamomum (Cardamon)	30%
Rosmarinus officinalis ct. cineole (Rosemary)	20%
Mentha piperita (Peppermint)	10%

Supporting research evidence:

Citrus Limonum, Rosmarinus officinalis, Mentha piperita used in the abdominal massage showed that aromatherapy helps relieve constipation in the elderly.⁸ Test results exhibits gut excitatory and inhibitory effects of Elettaria cardamomum. ²⁰

4. Senile problems involving Heart-Blood Deficiency**Signs and symptoms:**

Palpitations, insomnia, mood changes, anxiety, agitation, nervous affect the Shen, aggression, sometimes hallucinations. The tongue might be pale and thin.

Indicated essential oils:

Neuro cardiac relaxant, hypotensive, anxiolytic, calming in action to regulate Heart Qi, calm and clarifies the Shen.

Example essential oil formula:

Lavandula angustifolia (Lavender)	30%
Pelargonium graveolens (Geranium)	30%
Citrus reliculata (Mandarin)	20%
Melissa officinalis (Melissa)	20%

Supporting research evidence:

Pelargonium graveolens, Lavandula angustifolia and Citrus reliculata was proved to reduce the levels of agitation, withdrawal and wandering.²¹ Melissa officinalis is safe and effective for clinically significant agitation in people with severe dementia.²²

Senile dementia and other common aging problems: methods of essential oil application

As many elderly people receive little or no caring touch from others, introducing massage cannot only improve their quality of life but can also benefit those caring for them, massage being relaxing for both parties, giving both warmth and comfort. Aromatherapy and massage can provide a useful addition to psychological therapeutic interventions with clients suffering from dementia. ¹

- Aromatherapy massage application at 1.5% dilution in a base vegetable oil (approx. 8 drops per 20ml blend) for hands and feet, possibly abdominal massage for those who suffer constipation.
- Vaporized in the warm bath with the blend of 3 to 4 drops in honey in case massage is inappropriate or not wanted.
- Inhalation from a tissue with three drops of essential oil, tissue can be placed inside the shirt or night wear.

Senile dementia and other common aging problems: Supplementary interventions

B vitamins ²³, Omega-3 fat ²⁴, Ginkgo biloba ²⁵, Turmeric ²⁶

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