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The Relationship between Qi Deficiency, Cancer-related Fatigue and Quality of Life in Cancer Patients

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Abstract

Background: Qi (氣 qì) refers to the vital energy of the body in Traditional Chinese medicines (TCM). Qi deficiency (氣虛 qì xū) is the most common symptom in cancer patients according to the concept of TCM. We hypothesized that cancer patients with Qi deficiency suffer from poor quality of life (QOL) and fatigue.

Method: Among the 256 registered cancer patients screened at our outpatient clinic, a total of 198 were enrolled. The inclusion criteria were (1) age between 18 and 70 years, (2) cancer diagnosis confirmed by the professional physician, (3) being Chinese, and (4) Eastern Cooperative Oncology Group (ECOG) performance status rating (PSR) ≤ 3. The major outcome is the difference in QOL score in cancer patients with and without Qi deficiency.

Results: The initial results showed statistically significant differences in WHO-QOL scores in physical, psychological, and social domains between the groups with and without Qi deficiency as well as the groups with and without cancer-related fatigue (CRF). All patients with CRF present were also diagnosed as Qi deficient. In addition, among the patients with no CRF, 39.9% (69/173) were diagnosed as suffering from Qi deficiency, which led to poor QOL.

Conclusions: The present study showed statistically significant difference in WHO-QOL scores in physical, psychological, and social domains between the groups with and without Qi deficiency as well as the groups with and without CRF. Cancer patients diagnosed with Qi deficiency or CRF have poor QOL. The concept of Qi deficiency in TCM might be applied to cancer health care.

Key words: Qi deficiency, Fatigue, Cancer-related Fatigue, Quality of life, Traditional Chinese Medicine

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Introduction

Complementary and alternative medicines (CAMs), in particular herbal medicine and traditional Chinese medicine (TCM), are commonly used by cancer patients in Chinese-speaking population and Asian countries (Hsiao and Liu, 2010; Konkimalla and Efferth, 2008; Wu et al., 2009). TCM in combination with chemotherapy or radiotherapy can enhance the efficacy and ameliorate the side effects and complications caused by chemotherapy or radiotherapy (Chan et al., 2011; Qi et al., 2010). Syndrome differentiation of TCM plays a main role in treatment of cancer patients (Seki et al., 2005; Sun et al., 2010). The impairment of Qi (氣 qì) flow within the body is often observed in cancer patients who choose TCM as adjuvant treatment (Qi et al., 2010; Seki et al., 2005; Sun et al., 2010).

Fatigue is a common symptom or complaint among cancer patients (Wagner and Cella, 2004; Kontos and Viswanath, 2011; Stasi et al., 2003). Cancer-related fatigue (CRF) affects quality of life (QOL) including physical, mental and psychosocial aspects (Barsevick et al., 2010). Qi refers to the vital energy of the body in TCM. It maintains blood circulation, warms the body and fights diseases. Qi deficiency (氣虛 qì xū) is the most common symptom in cancer patients according to the concept of TCM. Many previous reports showed that Qi supplementation (補氣 bǔ qì) can help enhance the effects of cancer therapy (Chui et al., 2005; Li et al., 2007; Qi et al., 2010; Seki et al., 2005; Yan et al., 2008; Yan et al., 2010); and hence, the main role of TCM in cancer therapy is to balance the Qi flow in cancer patients. In addition, the QOL of cancer patients may be affected by Qi deficiency and CRF. In view of the above, we conducted this cross-sectional study to explore the relationship between Qi deficiency, CRF and QOL in cancer patients.

Materials and Methods

Study design and participants

This was a cross-sectional study conducted from January 2010 through December 2010 in Taipei City Hospital, Taiwan. Among the 256 registered cancer patients screened at our outpatient clinic, a total of 198 were enrolled. The inclusion criteria were (1) age between 18 and 70 years, (2) cancer diagnosis confirmed by the professional physician, (3) being Chinese, and (4) Eastern Cooperative Oncology Group (ECOG) performance status rating (PSR) ≤ 3. The exclusion criteria were (1) unconsciousness, (2) delirium and psychiatric, (3) complications present, and (4) any other conditions not suitable for study as evaluated by the physician-in-charge. The major outcome is the difference in QOL score in cancer patients with and without Qi deficiency. The protocol was approved by the Human Ethics Committee of our hospital. Informed consent was obtained from all the enrolled patients.

Qi deficiency

TCM practitioners make diagnosis in terms of Yin (陰 yīn), Yang (陽 yáng), Qi, Blood, and Organ (器 qì) imbalance on the basis of signs and symptoms observed by the doctors and reported by the patients. In cancer patients, Qi deficiency is the most common symptom. However, there are no existing questionnaires or diagnostic tools for Qi deficiency. Hence, we chose to use the interview approach, which is a common diagnostic method adopted by TCM practitioners. With the aim to devise a simple and efficient screening tool, nine TCM doctors with clinical experience referred to relevant references (Hu et al., 2005; WHO, 2007) and developed three yes-no questions for diagnosing Qi deficiency among cancer patients according to the concept of TCM. The questionnaire designed contained the following.

In the past week, did you often have the following symptoms?

(Often means more than 8 hour per day and more than four days per week)

(1) Felt exhausted or lack of energy
(2) Did not feel like talking or talked in a low and weak voice.
(3) Did not feel like moving about or did not have the strength to walk.

Cancer patients responding yes to two questions or more in the interview would be classified as being Qi deficient. Validation test results showed an alpha coefficient of 0.89 and Cronbach's alpha coefficient of 0.88, indicating that the questionnaire has good reliability.

Cancer-related fatigue

Fatigue caused by cancer or cancer therapy had been proposed for recognition by the World Health Organization (WHO) and for publication in the International Statistical Classification of Diseases and Related Health problems (10th revision) (ICD-10) (Lesage and Portenoy, 2002). We adopted the criteria