

An Objective Evaluation on Menopausal Syndrome and the Effects of Red Ginseng

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ABSTRACT

In order to evaluate menopausal syndrome objectively, examinations were performed as follows: 1) Simplified Menopausal Index (SMI : Koyama) and QOL questionnaire (Nagata) were examined subjectively. 2) urine 17-KS-S (S : Nishikaze), 17-OHCS (OH) were examined objectively. 3) A mobile telemedical device with EKG and KSG was lent to Patients. The subjects were 48 menopausal patients who visited our university hospital as outpatients. According to the results of S, OH, the subjects were divided into 4 Groups ; Group I is high S & high OH, Group II low S & low OH, Group III is low S & high OH, Group IV is high S & low OH. Group III was the largest (64.6%), Group IV was none. The subjects showed significantly lower QOL condition and higher score of SMI. In the QOL, questionnaire items of fixation to physical status (psychogenic reaction), sleep(insomnia), pain(chronic pain) were in common. In SMI, functional vascular symptoms were the largest number. On treatment, Group I was considered to have no need for supplementary agents, but anti-Oketsu agents were prescribed. For Group II and III some supplementary agents such as red ginseng were prescribed, because they showed low S. In conclusion, all the groups showed a significant improvement of QOL and SMI. Group I showed a decrease of OH, Group II showed an increase of S, Group III showed an increase of S and S/OH and a decrease of OH. These phenomena were considered prohomeostatic. In QOL, the items of chronic pain, insomnia and appetite were improved. In SMI, chillness, dyspnea, palpitation, pain and fatigability were improved. In mobile tele-medical device, abnormal findings were found in 88.2% of patients. General adaptation syndrome (Selye, H.) is considered to adjust human life. Menopause is the transit period to exhausted stage in it. So its symptoms vary from person to person. In conclusion, S and OH are useful both for classification of menopausal syndrome and for determining treatments according to the classification.

Introduction

Many studies on menopausal syndrome have been performed from the view points of psychoso-

matic or traditional oriental medicine. Lack of objectivity in symptoms and difficulty in identifying affected organs make such studies difficult. Although unidentified complaints on menopausal syndrome often are both physical and mental, they tend to lack objective pathological findings. Physicians are confused by such complaints and find it difficult to identify affected organs and pathology. Patients thus tend to remain untreated because most physicians do not consider unidentified symptoms life-threatening. For these reasons, menopausal syndrome become chronic and patients' quality of life (abbreviated QOL) declines¹⁾

To find essential menopausal symptoms, QOL should be introduced into symptom assessment. In developing an objective way to assess the syndrome, we designed a QOL questionnaire^{3,4)} using our original definition of QOL based on comprehensive medicine. This questionnaire uses a behavioral scientific method to assess QOL as objectively as possible. It is translated into English, Finnish, Swedish, Portuguese, Hebrew, and Chinese for the widest possible use.

High QOL is defined as a physically (biologically), psychologically, socially, and existentially satisfactory state as viewed by comprehensive medicine. Those who have good appetite, sleep well, have no problem with urination and defecation, enjoy sports at least 3 times a week, have no or mild but nonstressful pain, are psychologically stable, act adequately in the social environment of workplace, home, and school, and live a full life (meaning of life) are considered to have a high QOL.

Based on this definition, we revised the QOL questionnaire using a behavioral scientific method. Questions were reduced to 11 and items are standardized. Patients rate their own symptoms using a categorized 5-grade scale (self-rating). Items include (1) fixation to physical status (psychogenic reaction), (2) appetite, (3) exercise, (4) sleep, (5) defecation, (6) urination, (7) pain, (8) sexual satisfaction, (9) social satisfaction, (10) family happiness, and (11) sense of overall life fulfillment.

The Simple Menopause Index (abbreviated SM I), designed for Japanese women by Koyama *et al.*, divides menopausal symptoms into three categories: vasomotor, neuropsychological and nerve-motor. Each category is scored and 10 items are assessed for menopausal symptoms.

A new way of assessing biological functions uses 17-ketosteroids-sulfates (abbreviated 17-KS-S)²⁾ 17-hydroxy corticosteroids (abbreviated 17-OHCS), and the ratio of 17-KS-S to 17-OHCS (17-KS-S/17-OHCS, abbreviated S/OH). 17-OHCS is derived from cortisol, a typical stress hormone; 17-KS-S is derived from dehydroepiandrosterone sulfate (DHEA-S), a steroid. DHEA-S is produced by the adrenals, testes, brain and skin, and its functions include endocrine and immuno-activation activity. As an anticortisol hormone, it promotes immunoenhancement and stress-damaged tissue repair. Since DHEA-S has no feedback for the adrenocorticotrophic hormone (ACTH), minimum DHEA-S is transferred to the liver and other peripheral organs to be converted to metabolically active steroids via DHEA. Excess DHEA-S is metabolized in the liver and eliminated in urine as 17-KS-S.

Thus, 17-OHCS indicates the degree of stress (biological wear) and 17-KS-S indicates a reserve tolerance for stress (biological reparability). The S/OH ratio indicates a person's comprehensive

defense against stress. We have focused on the clinical significance of 17-KS-S for use together with QOL in assessing menopausal syndrome.

A mobile tele-medical device was used to assess functional pathology of patients with severe vasomotor symptoms. This device quickly detects, records, and transmits abnormal findings in daily life.

Subjects and Methods

Subjects were 48 Japanese women visiting our hospital due to menopausal symptoms. Their symptoms and QOL were assessed using SMI and our revised QOL questionnaire. 17-KS-S and 17-OHCS levels and the S/OH ratio were determined as described by Osamu Nishikaze *et al.* A mobile tele-medical device was lent to 34 patients with severe vasomotor symptoms showing no abnormal findings in chest X-ray film, ultrasonography, electrocardiography (ECG), stress ECG or Holter ECG. Their cardiovascular functions were studied used ECG and Korotkoff soundgraphy (KSG).

Results

Patients were classified into four groups by changes in 17-KS-S and 17-OHCS : Group I for increased 17-KS-S and 17-OHCS levels, Group II for decreased 17-KS-S and 17-OHCS levels, Group III for decreased 17-KS-S levels and increased 17-OHCS levels and Group IV for increased 17-KS-S levels and decreased 17-OHCS levels. Two thirds were classified as Group III and none as Group IV.

In all groups, QOL was significantly lower and SMI significantly higher. No significant difference in QOL of SMI was seen between groups.

Here you see QOL items and SMI items with a significantly lower score. Menopausal symptoms varied with the patient and were both physical and mental.

In the QOL questionnaire, the score for items of fixation to physical status, pain (particularly chronic), defecation, sleep, and sense of overall fulfillment was lower in all groups. In Group II, the score for appetite was markedly lower.

In SMI, menopausal symptoms are classified into the three types above. Symptoms varied with the group and were markedly different between Group I and II. Vasomotor symptoms were most common in all groups, indicating that those with menopausal symptoms require aggressive diagnosis of functional cardiovascular symptoms.

In Group I, no supplementary therapy was considered needed for menopausal syndrome. Ant-Oketsu formulate (*Kuoketsuzai*), particularly *Saikozai*, was administered to patients. In Group II and III with decreased 17-KS-S, red ginseng (*Kojinmatsu*) was mainly administered to patients for four

weeks as supplementary therapy.

These drug therapies significantly improved both QOL and SMI in these three groups.

In Group I, 17-OHCS was significantly reduced. In Group II, 17-KS-S was elevated. In Group III, the S/OH ratio was elevated and 17-OHCS reduced. These results show that drug therapies normalized abnormal hormone levels.

In the QOL questionnaire, patients noted significantly improved pain, sleep, fixation to physical status, and appetite. In SMI, cold hands and/or feet, shortness of breath, palpitation, pain, and fatigue improved.

In summary, menopausal symptoms were noted in both subjective assessment using QOL and SMI and in objective assessment using 17-KS-S and 17-OHCS.

In 34 patients with vasomotor symptoms, ECG and KSG were recorded by the mobile tele-medical device when such symptoms occurred. Abnormal findings were found in 88.2% of patients, and included arterial fibrillation, sinus arrhythmia, ventricular premature contraction, and abnormal ST segment; 93.3% of these were transient and disappeared after administration of nitrates and/or minor tranquilizers. Abnormal KSG findings were found in 94.1% of patients.

Discussion

Menopausal syndrome have a complicated pathology. Their physical pathology can be functional. At the climacteric, functional pathology is most likely to become organic, when physical, psychological, social, and/or existential problems, aging, and life style strain greatly influence progress of pathology, and when the incidence of cancer increases.

When the general adaptation syndrome suggested by Hans Seyle is considered, the climacteric is a time when resistance to exhausted stage. The onset of menopausal syndrome depends on the individual. Patients with these symptoms may not be diagnosed correctly unless symptoms are assessed both objectively and subjectively.

Although the QOL questionnaire and SMI are useful for such assessment, their combination based on the subjectives of the assessment is important. 17-KS-S, 17-OHCS and S/OH are useful for objective assessment. It is not too much to say that they are indispensable for the correct assessment of a complicated pathology and its treatment.

A mobile tele-medical device routinely and immediately detects a disease in daily living and immediate transmits information on the disease to the physician. It is essential for diagnosing and treating diseases caused by daily habits and for home treatment. In our study, the device was used to examine 34 patients who exhibited vasomotor symptoms without other abnormal findings in routine cardiovascular examination. The device detected abnormal findings in 88.2% of patients. Abnormal KSG was found in 94.1%, suggesting hemodynamic abnormality. Such a device thus may be useful

for diagnosing functional pathology associated with vasomotor symptoms.

In our study, menopausal syndrome was treated based on changes in 17-KS-S and 17-OHCS. Supplementary therapy was mainly used and Oketsu syndrome (local pathology caused by venous congestion) was treated. Since all therapies in our study improved the index for menopausal symptoms, they seemed effective for such symptoms.

When items scores significantly improved in the QOL questionnaire and SMI were studied carefully, most were found related to functional pathology. The use of a psychosomatic approach and the administration of Oriental herbal formulae appear necessary for improving psychological, social and existential problems.

Conclusion

We assessed menopausal symptoms both subjectively and objectively and treated symptoms based on assessment results. Diagnosis and treatment required comprehensive medicine³⁾ in which modern occidental diagnostics, traditional oriental medicine and psychosomatic medicine are integrated.

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References

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