Case Study

The Case of a Stewardess Suffering from Salpingitis Caused by Stress on Aerial Service Who was Effectively Treated with Psychosomatic Therapy Including Counseling and Medication

Eiichi UCHIDA¹, Mitsuko WATANABE¹, Hiroko ISHIKAWA², Chihito SASKI³, Fumika OKAJIMA⁴, Masayuki YAMAOKA⁵, Taïsaku KATSURA¹ and Tetsuro OKINO⁶

¹Department of Psychosomatic Internal Medicine, LCC Medical Institute on Stress, ²Department of Health Sociology, The University of Tokyo, ³Department of Psychology, Ochanomizu University, ⁴Department of Nutrition, Kagawa Nutrition University, ⁵Department of Psychosomatic Internal Medicine, Kudan-Zaka Hospital and ⁶Mitsubishi Material Co.

Key words: Salpingitis, Aerial service, Stress, Psychosomatic therapy, Depression, Vegetative liability

A strong association exists between work on board aircraft over a long period and stress in aerial service. There have been a lot of reports on the stress, concerning many complaints of fatigue or fatigue-related symptoms including lower back pain in aircrew, disorders of the menstrual cycle, and psychological performance1–3). On the other hand, there are few clinical studies on results of stress such as salpingitis based on depression in the course of aerial stress. In this report, we discuss a case of chronic salpingitis caused by stress due to aerial service from the viewpoint of occupational health and psychosomatic medicine.

Case Report

H.N. is a 32-year-old stewardess belonging to a domestic airline. Since September, 1994, she had suffered from chronic pain of left ear, general fatigue, disturbance of sleep, frequency of urination, shoulder and neck stiffness and dizziness. She consulted an occupational otorlaryngologist and was diagnosed only with salpingitis. She was not satisfied with the diagnosis, because she felt that her symptoms had to be related to the stress related to work on board aircraft. She visited our clinic on 15 December, 1994.

Past history

She had suffered from periodical vomiting in her childhood, periostitis at the age of 22, and chronic nettle rash and sleep disturbance when she was 29.

Family history

Her father, a 62 year-old lawyer, has been under treatment for diabetes mellitus. Her mother, 62 years old, had suffered from goiter, but recovered. Her 30-year-old younger sister, unmarried, suffered from ovarian cystoma and myoma of the uterus at the age of 27.

Physical examination and clinical data

Body height 163 cm and weight 54 kg. There was nothing to be particularly noted except for irregularity of menstruation and slight redness of the pharynx. Her nutritional condition was good. She did not have anemia. No specific symptoms were found on the tongue, the parotid axillary lymph node on thyroid gland.

Her blood pressure was 130/80 mmHg. The biochemical tests of urine, blood and ECG showed no abnormalities.

Birth

She was born in Tokyo. Her father was unfaithful and her parents had often had quarrels with each other since her childhood. As she was not cared for by them properly, she often felt loneliness and was always nervous. After her graduation from local junior high school, she entered a private high school attached to a famous women’s university in Tokyo. She was quiet and could not get along well with her classmates who seemed to be rather aggressive. She was often absent from high school and university. She started to work as a stewardess in a domestic airline after graduation from the university at the age of 22.

Her current boy friend (35 years old) had been married, but was divorced in July of 1995, so they plan to marry. Although they sometimes enjoyed playing tennis together in a park, he didn’t understand her health problems at all, because he enjoyed good health. She, while under treatment, quit work in March, 1995. She submitted a certificate of diagnosis to the union in the company several times, since the labor union did not treat her well. But the troubles were all resolved, because she gave adequate reasons. In April of the same year, another trouble occurred between the husband of her father’s mistress and her mother; she adjusted to the relationships between them. In the course of her resolving these problems, she felt under heavy stress.

Occupation

She entered the airline company at the age of 22. She had worked on international airlines after domestic airline service for a year, but soon returned to the domestic service because of poor health. Since then she had been working on board until six months before her retirement.

Received Jan 5, 1999; Accepted June 4, 1999
Correspondence to: E. Uchida, Ohtsuka · Eiichi Clinic, Kinseido-building 401, Minami-ohtsuka 3-46-10, Toshima-ku, Tokyo 170-0005, Japan
Mental tests
The results of CMI (Cornell Medical Index) tests showed her personality to be in the IV region (Neurosis type) according to the Fukamachi method, and of the vegetative liability type according to the Abe method. A depressive state was indicated by her SDS (Self-rating Depression Scale) score: 61 (>50). And in the SGE (Self Grow-up Egogram), the CP score (Critical Parent) showed a personality critical of other people (14/20); NP (Nurturing Parent) characterized a kind and helpful personality. A (Adult) revealed mature judgment and decision, and FC (Free Child) indicated a cheerful and positive character. All these scores were 16/20; AC (Adapted Child) including a cooperative personality was rather high at 17/20. The data indicate her high adaptability, but the YG (Yatabe-Guilford) test signified type B' (unstable personality characteristics).

Personality
She was a serious type of woman and could not refuse what was asked of her. In spite of having unstable aspects, she over-adapted herself to her environment, and was obliged to be perfect in her work and toward others. She confessed that she had had depressive moods since her high school days and had often been absent from university. She had managed to graduate from high school.

Clinical course
The clinical course is shown in Fig. 1. The physical symptoms of the patient seemed to be mainly caused by salpingitis and depression; drug therapy including an antidepressant and a tranquilizer was given as shown in Fig. 1 from (1) to (5). On the other hand, she was likely to have strong psychological conflicts on the basis of her psycho-social background; 20–30 min counseling on every consultation was also performed, to achieve "awakeness" in her psychological pattern. Autogenic training (AT) and transactional analysis (TA) was introduced into her counseling. Superficially, she behaved in a kind and rational way, but accumulated heavy stress in her mind.

Recovery from the pain in her left ear and obstruction of the pharynx seemed to be difficult and was affected by her psychological stress; the pain became more intense

Fig. 1. Clinical Course and Treatment.
Treatments in Fig. 1 are as follows;
(1): ethyl-lofrazepate (2 mg, 1x v.d.S.)
(2): ethyl-lofrazepate (2 mg, 1x v.d.S.), amitryptiline (20 mg, 2x), bromazepam (4 mg, 2x)
(3): ethyl-lofrazepate (2 mg, 1x v.d.S.), amitryptiline (20 mg, 2x), flavoxate hydrochloride (600 mg, 3x), bromazepam (4 mg, 2x)
(4): ethyl-lofrazepate (2 mg, 1x v.d.S.), amitryptiline (20 mg, 2x), flavoxate hydrochloride (600 mg, 3x), bromazepam (4 mg, 2x)
(5): ethyl-lofrazepate (2 mg, 1x v.d.S.), amitryptiline (20 mg, 2x), flavoxate hydrochloride (600 mg, 3x), keigai-rengyo-to (7.5 g, 3x), bromazepam (4 mg, 2x)
when she had trouble with her boy friend or with her family, and when she was exposed to cool air or wet weather. Keigai-Rengyou-To was effective for the pain as shown in Fig. 1–(5). Similarly, frequency of urination when riding in a car or watching movies, hyperventilation or general fatigue occurred according to the severity of her mental problems.

In the course of her treatment, she had the following three mental problems:
1) She decided to retire from the airline company, where she had worked for about ten years after consulting an occupational physician, and negotiated with the labor union to make the company admit that her salpingitis and depression were caused by service on board aircraft.
2) Her boy friend divorced his wife, but she found him to be mentally immature and felt anxious about continuing communication with him.
3) Her father had a love affair with a woman whose husband tried to contact her family, and she settled the matter in place of her father. Because of the trouble, her mother suffered from bronchial asthma, but the patient’s conversation with her father increased, and she got to be able to easily express her feelings and opinions.

Discussion

The patient was supposed to have suffered from aerial salpingitis and vegetative liability because of (1) the work on board aircraft which caused jet lag and fatigue, (2) her serious and nervous personality which was shaped by the continuous quarrels between her parents in her childhood, and (3) the stress induced by the unstable relationship with her boy friend. It is implied that the family related stress might have been reduced by her work as a stewardess, which allowed her to stop out at night away from her parents. The patient herself admitted the facts during the counseling.

From the viewpoint of occupational medicine, various problems have been pointed out regarding to the work of stewardesses, such as working hours, the working environment, and stress at work. Indeed, it has been reported that the complaint rates for fatigue and stress at work are associated with such disorders as back pain, which is often found among stewardesses as back pain, which is often found among stewardesses as back pain, which is often found among stewardesses as back pain, which is often found among stewardesses as back pain, which is often found among stewardesses as back pain, which is often found among stewardesses as back pain, which is often found among stewardesses as back pain, which is often found among stewardesses. When we considered the unstable physical and mental condition of the patient and her complicated family situation, it was easily supposed that her tolerance of stress had declined. Therefore, it was indicated that stressful work such as that on board aircraft, together with the declined immune activity caused by depression, might lead to comorbid and more serious inflammation of her auditory tube associated with the effects of pressure.

The patient doubted the health management system of her company which was unwilling to admit the possibility of aerial stress, when she consulted the occupational physician in her company. Stress caused by work in airlines has been widely discussed. The health management systems of airline companies in Japan will therefore need to be reconsidered in future. As in this case, obstruction of the ear, stiffness of the neck and lumbago may be inevitable in work involving exposure to changes in air pressure and standing position over long periods in unstable aircraft.

Although there have been a lot of reports on inflammation of the auditory tube caused by changes in air pressure, it has been rarely discussed from the viewpoint of occupational medicine, as a problem of stress related stenosis accompanied by depression. When we consider the declined immune activity caused by depression and the work stress on board as well, the effect of air pressure and long working hours on the auditory tube cannot be ignored. Moreover, if other daily stress is added, at least 3–6 months would be needed for the period of treatment. In this case, the patient could concentrate on her treatment because she had decided to retire. As in this case, the patients suffering from physical symptoms based on depression frequently experience a decline in physical strength. When they go back to work, it is often necessary to gradually increase the amount of work and take more rest than healthy workers. Furthermore, 6–12 months of follow-up is essential for the treatment, since they need to continue taking medicine.

On the other hand, Keigai-Rengyo-To (7.5 g, 3 × v.d.E.) had a remarkable effect in the treatment of obstruction and ear pain caused by salpingitis. Keigai-Rengyo-To was used originally for chronic rhinitis, tonsillitis, empysema, acne and so on. Although it has not been applied to salpingitis, it is reported to have similar effects to analgesics and anti-inflammatory drugs. Therefore we used it in a clinical trial and found it to be effective. After the clinical symptoms faded, the patient was diagnosed as completely recovered by an otorhinology physician. It is considered to be one of the effective treatments for similar forms of aerial salpingitis.

From a few mental tests and her clinical symptoms, some vegetative liability related to depression was supposed to exist; medication with an antidepressant and counseling was very useful for this patient. There would be many patients similar to this. Therefore, evidence of psychosomatic therapy for aerial service workers would be effective on the symptoms of aerial stress.

Reference


