DISCUSSION
(MAIN FINDINGS)
CHAPTER V
DISCUSSION (MAIN FINDINGS)

Keeping in view the objectives of the study the main findings as mentioned earlier (p/52-53) have been discussed meaningfully in the subsequent pages under the following headings:

(A) Psychological characteristics of vertigo patients.

(B) Social characteristics.

(C) Audio-vestibular functions.

(A) Psychological characteristics of vertigo patients

Clinicians have a continuing interest in the psychological aspects of those suffering from vertigo. A number of ENT clinicians have based on their personal contact with their patients, voiced the impression that psychological factors play an important role in the causation and course of the disease than is commonly realized. Jongkees, in particular, has given a vivid description of the personality of these patients and their emotional reactions to the fright of attacks; he has also included some simple therapeutic guidelines in the recommendations for treatment.

Clinicians have frequently observed apparent peculiar personality characteristics in patients with
and overreactivity. Perhaps because of this, several studies have attempted to establish the extent to which emotional factors are involved in patients with vertigo. Some investigators have concluded that patients with Meniere’s disease have an anatomic predisposition and that psychic factors determine the symptoms and its severity. A few others have examined the relationship between Meniere’s symptoms and psychological stress and concluded that psychic stress intensified the symptoms of Meniere’s disease. The emotional factors were viewed as either necessary or sufficient for the development or onset of the disorder. Many clinicians concluded that Meniere’s disease was a disorder with emotional causes. The idea that emotional causes are important in the development of Meniere’s disease persists among many clinicians. Emotional aspects of Meniere’s disease have been discussed prominently in the otologic literature and have been implicated as etiologic factor. Many physicians have concluded that the symptoms are primarily of psychological origin and reflect the emotional state of the patient.

The earlier studies, however, suffered from a variety of methodologic flaws. Some studies were simply case reports based only upon clinical observation. These are useful for generating hypotheses but do not represent scientific evidence. Other studies did not use objective measurement techniques or did not apply appropriate
statistical tests or utilize control and comparison groups. Even those using such groups failed to consider the effects of vertigo. In other words, many of these investigations compared patients with Meniere’s disease to other non vertiginous otologic patients, i.e., who did not have vertigo. Considering the impact of episodic unpredictable vertigo on a patient’s life, it is not surprising that, compared to non vertiginous patients, patients with Meniere’s disease appeared to have a disorder caused by emotional problems.

The present study overcame these methodologic flaws by using objective measurement techniques and including Meniere’s disease as well as several other non-Meniere’s vertiginous groups (cervical spondylosis, BPPV, hypertension and psychogenic) and a control group (normals) in the purview of the study.

The main objectives of this study was to bring to notice certain features of the condition which will help to clarify the respective roles of otologists as well as psychiatrists in their joint responsibility for diagnosis and treatment.

From the viewpoint of psychiatric disturbance this study has revealed interesting findings which deserve careful attention and consideration. When either group of
vertiginous patients* was compared to control group, significant differences appeared. The vertiginous groups in comparison to normal subjects (control group) seemed more depressed, lonely, distressed and disturbed. They were more anxious, more lonely, more introverted, experienced a higher mean number of depressive symptoms, had higher paranoid tendencies, and showed a greater frequency of psychopathologic profile. Thus, on the basis of increased psychopathology, when contrasted to the control group, either the Meniere’s, or the non-Meniere’s vertiginous group could be said to be higher on different dimensions of psychiatric disturbance included in this study. The concept of the "psychological vulnerability" is useful in explaining this finding which supports Hypothesis I which states: "The vertigo patients will score significantly higher on different dimensions of psychological disorders than normal subjects." One explanation for this finding is that the disabling/distressing symptoms such as vertigo are apt to elicit negative emotions, which may interact with the symptoms and lower the vertigo patients’ tolerance for a symptom. But such psychological disorders are secondary to the disease and are based on the reality of disturbed equilibrium. Evidence does not indicate that in vertigo patients psychological disturbance was present prior to the onset of the disorder.

* C.S., BPPV, M.D., H.T., PSY.
A comparison involving different vertigo groups, namely Cervical spondylosis, BPPV, Meniere’s disease, Hypertension and Psychogenic vertigo has clearly revealed interesting results:

1) The results were not able to show that patients with Cervical spondylosis, BPPV, Meniere’s disease, and Hypertension differed from each other as group on various dimensions of psychological distress. Noteworthy is the finding that no evidence of higher psychiatric disturbance in patients with Meniere’s disease was found. Thus, when the patients with Meniere’s disease were compared with other vertiginous patients with disorders of known organic etiologies, there were no psychological differences.

These results contradict the findings of some earlier researchers. Atleast three perspectives appear in the literature to explain the relationship between Meniere’s disease, personality characteristics, and stress. Early research presented evidence that psychological factors played a significant role in the development of Meniere’s disease. In a study of 64 patients, 20 with otosclerosis and 44 with Meniere’s disease and vertigo, a greater prevalence of the psychosomatic "V" configuration was found on the MMPI in the Meniere’s group as compared with the otosclerotic group, and Hichcliffe (1967,a,b) offered this as evidence for a "psychosomatic" disorder. Some investigators have concluded that patients with Meniere’s disease have an
anatomic predisposition and that psychic factors determine the symptoms and its severity (Siirala and Gelhar, 1970) while others have examined the relationship between Meniere’s symptoms and psychological stress and concluded that psychic stress intensified the symptoms of Meniere’s disease (Lucente, 1973, Fowler and Zeckel, 1953).

Crary and Wexler (1977) conducted a carefully controlled study of 108 subjects with Meniere’s disease using the MMPI, Taylor’s Manifest Anxiety Scale, Spielbieger’s State Anxiety Scale as well as tests constructed for the assessment of psychological variables and physiological symptoms and associated disability. On the basis of their results, the investigators postulated that psychological stress results from the disease symptoms and may play a role in their precipitation. It is significant to emphasize that most of the earlier researchers reporting many significant differences compared patients with Meniere’s disease to nonvertiginous otologic patients. However, in this study when the patients with Meniere’s disease were compared with other vertiginous patients with disorders of known organic etiologies, there were no psychological differences.

2) Though fairly common, vertigo of purely psychic origin has not received sufficient attention from either otologists or psychiatrists. In this study, the cases of psychogenic vertigo showed peculiar characteristics from the viewpoint of psychological vulnerability. Psychogenic
vertigo patients as a group have been found to be markedly higher on loneliness, depression, defective integration, ego weakness, paranoid insecurity, emotional lability and frustrative tension (id pressure). The high incidence of depression, loneliness, and anxiety appears to be a significant problem in our population of psychogenic vertigo patients. As a result of these findings, Hypothesis II which states: "There will be no difference between different types of vertigo patients on different dimension of psychological distress" is rejected.

The findings clearly reveal that loneliness, depression and anxiety are interwoven with psychogenic vertigo, and those of us who cannot unravel this thread will never be able to see the whole tapestry. While loneliness and depression are rarely fully addressed in the initial evaluation of otologic symptoms, the results support further investigation and management of these individuals not responding to the conventional medical therapies. Possibly, for many psychogenic vertigo patients, the symptom of vertigo is a concrete symbolic representation of their upset psychological state and conforms to the hysterical pattern of conversion of a mental idea into a physical feeling. In psychogenic vertigo patients, the symptoms of vertigo possibly is used as a means of regaining control and as an additional solution to the general psychological distress. The symptom itself may be used as a defense
against psychological distress, which need to be removed by long, patient psychotherapy for complete relief. This may account for the fact that most neurotics experience the phenomenon of vertigo as one of person bodily disturbance (the patient spins) rather than of the external world.

It is significant to emphasise that this study does not implicate emotion as an etiological agent. Rather, it suggests that psychological problems may play an important role in severity of symptoms experienced.

Evidence in this study does not indicate that in psychogenic vertigo, the psychological vulnerability was present prior to the onset of the disorder. But the results clearly suggest psychological vulnerability in patients with psychogenic vertigo. It is possible that patients with psychogenic vertigo react to the tremendous fright and insecurity caused by the sudden and completely unexpected attack of vertigo, by intense anxiety as well as developing depression symptoms and loneliness. These psychological reactions to the somatic manifestation and consequences of the disease (somatopsychic effects) are at least as important for the doctor to understand as the psychosomatic causes and effects in the production of the condition. Actually in the case of psychogenic vertigo, the two processes might interact: because of their overconscientious personality these patients tend to worry more than others about their illness and its consequences for their future.
Psychogenic vertigo patients tend to be psychologically more devastating than many diseases because its major symptom, vertigo strikes at the heart of the matters by disrupting control.

Patients with psychogenic vertigo should be given a complete explanation. First, they have a disturbing disorder whose symptoms are episodic, stressful, and at times disabling. Second, the patient should understand that the psychological vulnerability may not cause the disease or its symptoms, but they may well make it more difficult for the patient to function. It is vital to emphasize to the patient with psychogenic vertigo that depression, loneliness, anxiety or whatever psychological distress factors are prominent, simply add to the burdens created by the disease.

In case of psychogenic vertigo, perception of problems is made worse and more disabling by high levels of psychological distress. The physician should extend every effort to help the patient reduce the intensity of response to stress. Psychotropic medications may be helpful. The physician may offer to listen and talk with the patient about how psychological distress influence his or her problems. If this is considered not desirable by the physician, referral to a mental health professional is a possibility. This can be accomplished in the hands of an experienced psychiatrist, trained to deal with neurotic and
psychosomatic conditions.

It should be kept in mind that for psychogenic vertigo, psychiatric treatment is not always available in the hospitals and a large number of patients fail to accept the psychiatric treatment. To some it is too great a threat; others simply have no awareness of emotional processes, and psychological treatment is like trying to elicit the principles of higher mathematics from a bricklayer. Recognition of such limitations must be part of the joint consideration of diagnosis and therapy by the otologist and psychiatrist. Patients with psychogenic vertigo would respond best to a combined medical and psychological approach. Psychological assessment, consultation, and the use of adequate medication may prove beneficial to the overall well being of the patient and provide an adjunctive treatment for psychogenic vertigo which has not received sufficient attention from either otologists or psychiatrists. In the absence of psychological appraisal and counseling a large number of psychogenic patients would be left alone with their invalidating symptoms. It is as serious a mistake to treat organic disturbance psychiatrically as to treat a psychological disturbance organically. In each case the result may be disastrous. It is, however, a challenging exercise to properly manage vertigo of purely psychic origin and psychiatrists seem particularly well placed among specialists to investigate these patients.
Finally, it is not known whether the present results is an accurate reflection of the position of different vertigo groups on different dimensions of psychologic disturbance, or if the findings merely reflect the need for a larger sample. Further study in this area seems warranted and hopefully with result in improved treatment. A prospective study is needed to determine whether or not these psychological measures accurately predict those patients who will be ill more often and more severely. If these psychological measures prove accurate in prospectively predicting those patients with psychogenic vertigo who will have more severe symptoms, they might be helpful in selecting patients in whom additional counselling concerning the natural course of illness, effects of treatment, and reasonable expectations as to outcome might be worthwhile. Moreover, it is essential to examine whether a therapy which combined judicious use of medicines with a form of psychotherapy based on knowledge of the psychological distress of psychogenic patients have a beneficial effect on the course of the disease?

**Audio-vestibular measures**

Physicians upon learning that their patient’s complaint in giddiness or dizziness, experience a "slight decline in spirits", and this happens notwithstanding the diagnostic methods available.

Vertigo and imbalance may be the result of
lesions involving the connections between vestibular end organs and cerebellum, medial longitudinal fasciculus and eye muscle nuclei, or vestibulo-spinal and vestibulo-reticular tracts, including the cortex. In addition, disorders of the sensory receptors in the labyrinth may also occur. In brief, it can be stated that vertigo can be caused by a lesion in any part of the vestibular system, including the ear as well as the nervous system. The components of the otoneurological test battery have now moved from examining the inner ear function to the CNS function. 

It was not the intention of this study to give an extensive update on currently available methods. In this study the commonly used audiological and vestibular investigations specifically referring to Puretone audiometry, Speech audiometry, Impedence audiometry, Tone Decay Test and Cold caloric test were performed on all the subjects belonging to five different groups of vertigo patients. 

From the view point of vestibular functions although there were some abnormalities, no characteristic pattern emerged since there was no significant difference among the groups on cold caloric test. There was also no significant correlation of severity of hg loss by pure tone audiometry thresholds or speech discrimination with caloric weakness. However, audiological investigations showed greater abnormality than vestibular investigations. More precisely speaking, the Meniere’s disease patients showed
mild to moderate hearing loss at all the 6 frequencies (250-8000Hz) employed in this study and other groups had hearing within normal limits. Thus, the major findings of this study concerning audiological features of Meniere’s disease are in agreement with those of other investigators (Paperella, 1991, 1984; Meyerhoff, 1981). In 50% of patients with Meniere’s disease there was clear cut evidence for unilateral hearing loss and in 30% of patients, bilateral hearing loss was present at all the frequencies, with corresponding decrease in speech discrimination. This supports the well known observation that Meniere’s disease is an inner ear disorder characterized by spells of vertigo, nausea & vomiting, associated with tinnitus, ear pressure and sensori hearing loss. It is because of this several studies of the natural history and epidemiology of Meniere’s disease have frequently included audiometric data because vestibular tests are relatively insensitive for detection of the vestibular abnormality associated with Meniere’s disease even if symptomatic diagnostic criteria are met. Thus a hearing loss has obvious diagnostic significance for Meniere’s disease. Here it is significant to emphasize that the results of caloric testing were found to be abnormal only among a few cases of Meniere’s disease (5 out of 20). Possibly, Meniere’s disease may progress independently in
the audiometry and vestibular portions of the labyrinth *

The results of this preliminary study suggest a need for a clinically feasible, quantitative test of overall vestibular function with a screening sensitivity equal to or exceeding audiometric techniques and existing vestibular test batteries. These results need replication on a larger sample of vertigo patients so that audio-vestibular functions become more clear.

Conclusions

This study has revealed interesting results from the viewpoint of psychiatric disturbance in vertigo patients. Psychogenic vertigo as a group has been found to be higher on different measures of psychological distress. Thus, patients with psychogenic vertigo would respond best to combined medical and psychological approach. Psychological assessment, consultation and the use of adequate medications may prove beneficial to the overall well being of the psychogenic vertigo which failed to receive sufficient attention from either otologists or psychiatrists. In the absense of psychological appraisal and counselling, a large number of psychogenic vertigo patients would be left alone with their invalidating symptoms. It is a challenging exercise to properly manage vertigo of purely

*Since the main features of Meniere’s disease in this study are the recurrent tinnitus and progressive hearing loss with more or less normal caloric response (Majority of Meniere’s disease patients had normal caloric response within normal limits)
psychic origin and psychiatrists seem well placed among specialists to investigate these patients. Finally, it is not known whether the present results is an accurate reflection of the position of different vertigo groups on different dimensions of psychological distress or if the findings merely reflect the need for a larger sample.

It is essential to examine whether a therapy which combined judicious views of medicine with a form of psychotherapy based on knowledge of the psychological distress of psychogenic vertigo patients have a beneficial effect on the course of the disease or not. The future investigations can be directed towards this end.