POST-TRAUMATIC VERTIGO AND DIZZINESS*

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INTRODUCTION

A common complaint following head injury is a sense of rotation of objects or of the patient himself, that is, a true vertigo, or a less specific sense of movement referred to as "dizziness" and "giddiness." Although giddiness often occurs as a part of the post-traumatic syndrome (of which the other prominent features are headache, emotional lability, and difficulty in mental concentration), it may be present alone.

Statistics on the frequency of occurrence of dizziness following trauma vary somewhat from author to author. Glaser in a series of 325 cases of head injury found dizziness in 60 per cent of the patients following trauma. Linthicum and Rand in their series of 36 cases reported vertigo in some form in approximately 90 per cent of their patients, but used the term to include some degree of equilibratory disturbance ranging from a mere feeling of uncertainty to actual systematized vertigo. Osnato and Giliberti, in an analysis of 100 cases of concussion with or without fracture, grouped dizziness and giddiness under one heading and found it present in 57 of their patients. Schuster reported that 40 per cent of all head injuries produce ear symptoms. Russell analyzed 200 consecutive case records of head injury in which dizziness was noticed in 21 cases. True vertigo was not present in any of the cases examined. The discrepancies between these figures may be partly explained by the differences in material and the sub-categories included under dizziness by the various investigators.

In a discussion of dizziness per se following trauma, or as a part of the post-traumatic syndrome, there are many opinions as to what are the important factors in the evaluation of dizziness. In general there are three schools of thought—one group who consider dizziness, as well as the other symptoms of the post-traumatic syndrome, to be of psychogenic origin; another group who report it to be exclusively of physiogenic origin; and others who emphasize the importance of both types of factors.

Grove in a survey of the subject remarked that post-concussional vertigo of vestibular origin is characterized by a systematized dizziness accompanied by nystagmus brought on by movements of the head. He considered other types of equilibratory disturbance to be of psychoneurotic origin. Rowbotham expressed the opinion that the headache and dizziness of the post-

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CONCUSSIONAL SYNDROME HAVE A DIRECT ORGANIC BASIS IN CONTRAST TO TREMOR, ANXIETY, AND GENERAL NERVOUSNESS WHICH ARE DUE TO A NEUROSIS. SCHALLER INCLUDES DIZZINESS UNDER "POST-TRAUMATIC PSYCHO-NEUROTIC STATE." SYMONDS, LEWIS, AND ONE OF US EMPHASIZE THE IMPORTANCE OF BOTH PHYSIOGENIC AND PSYCHOGENIC FACTORS IN THE POST-TRAUMATIC SYNDROME. THEY FURTHER STATE THAT THE PRACTICE OF LABELLING THE SYNDROME ORGANIC IN ONE AND FUNCTIONAL OR NEUROTIC IN ANOTHER IS UNPROFITABLE AND MISLEADING. THE PURPOSE OF THIS INVESTIGATION WAS TO STUDY SUCH FACTORS IN RELATION TO POST-TRAUMATIC DIZZINESS IN A GROUP OF CIVILIAN HEAD INJURIES ADMITTED TO A GENERAL HOSPITAL.

METHOD

The present report is based on a series of 200 consecutive head injuries admitted to the Boston City Hospital. Selection to some extent was inevitable, for the requirements of the inquiry necessitated that all cases where the essential data on duration of loss of consciousness were complicated by alcoholic stupor or other unrelated complications be excluded. Further, since the main objective of the inquiry was related to disability in persons in regular occupations, uncomplicated by the effect of age or difficulty in follow-up, the study was limited to age groups between 15 and 55 years and excluded chronic alcoholics and chronic unemployed. The material, selected in these respects, was fairly evenly distributed in the age group 15-54, and consisted of 125 males and 75 females of a variety of national stocks (71 predominantly Irish) and occupations (96 skilled or semi-skilled workers).

The patients were studied as soon as they were brought into the hospital, which in most cases was within a few hours after the accident. They were then followed daily during their hospital stay and after discharge in the out-patient clinic at intervals of one to two months for periods of six to fifteen months. On each follow-up visit each patient was seen by a neurologist, psychiatrist, psychometrist, electroencephalographer, and social service worker. Roentgenograms, spinal fluid examinations, electroencephalograms, and other laboratory procedures were done when possible during the hospital stay and whenever necessary in the course of the follow-up. The following factors concerning each patient were especially noted—locations of any scalp or skull injury, signs of brain injury, any bleeding from the ears, deafness, disorders of the drums, and any previous history of vertigo or aural disease. The patient was questioned as to when the vertigo was first experienced, whether there was any definite sense of motion, whether he felt that objects were moving or whether he was, the effects of posture, effort, both physical and mental, duration and frequency of attacks, associated symptoms, what relieved and what aggravated the attacks, and his affective state. The routine tests such as Weber, Rinne, coin test, whispered voice, etc. were carried out in all cases.

RESULTS

Dizziness or vertigo following head injury was always intermittent in the group of patients seen by us. Each attack was of variable duration, usually lasting a few minutes. The severity and frequency of the attacks were likewise quite variable. The outstanding precipitating factor was change in posture, whether sudden or otherwise. This factor was present in 53 (78 per cent) of the 68 patients with dizziness during convalescence. In 9 other patients (13 per cent) emotional stress was reported as a precipitating factor. Relief from an attack was generally sought by lying or sitting down and often by closing the eyes, and these simple procedures were usually felt by the patient to be of value.

Ninety-nine (50 per cent) of the 200 patients complained of dizziness at