

attack, or to go by himself on the streets, and in short becomes an invalid with hypochondriacal tendencies.

In a remarkable monograph on this subject Professor J. Grasset,³ of Montpellier, divides the vertigos of arterio-sclerosis into three forms: (1) Simple vertigo, (2) Vertigo with epileptiform crises, and (3) Vertigo with slow pulse and syncope, or epileptiform attacks. Some of the features of the slighter attacks, as already roughly sketched, undoubtedly suggest a similarity to mild epileptic seizures, for instance, the paleness of the face, the oppression and the final confusion, depression and tendency to sleep, but personally I have never encountered well marked convulsive phenomena reasonably attributable to this cause.

With Huchard,⁴ this writer is inclined in some cases to attribute acquired habitual extreme slowness of the pulse, which in numerous reported instances has ranged from twenty to forty per minute, or even less, to the effect upon the medulla of an arterio-sclerosis acting mechanically to lessen the blood-supply to the cardiac centres. As yet this hypothesis has received, as far as I have been able to ascertain, no positive anatomical or experimental support, though it is seductively reasonable. This bradycardia is almost always marked by syncopal and vertiginous features and arises in individuals predisposed to or actually the subjects of marked arterio-fibrosis.

The diagnosis is often one of extreme difficulty, in spite of a hasty contrary statement by a recent American writer, and I have known this symptomatic vertigo confused with Meniere's disease by a very competent specialist in nervous diseases, for it may, as in that particular instance, be of a systematized character, that is to say, marked by a sensation of falling in a given direction, or of being rotated in a constant manner to the right or left, and even associated with a suggestive stagger. If to this a little middle ear catarrh is added, a diagnosis of aural vertigo might be easily reached, but a closer and somewhat wider examination will detect the integrity of the auditory nerve and the presence of the arterial fibrosis with the underlying predisposition of alcoholic excess, syphilis, gout, rheumatism, chronic lead infection, or other constitutional state of etiological significance.

In the treatment the basic element is the object of attack, and whatever this may be, the iodide of potash will find an indication in the arterial change, which if recognized in its incipency can be practically controlled, providing the patient is manageable. It is the sheet anchor, and given in moderate doses of from thirty to ninety grains a day for a number of months, much benefit and often a substantial cure can be expected.

I am lead to emphasize the importance of this vertigo because it is a very early symptom of a condition which neglected leads to distressing and even fatal results, and which unrecognized is the source of endless anxiety and misery to the patient and of chagrin and disappointment to his medical attendant. If it were desirable numerous case records could be cited, but it is hoped that attention once having been called to a proper interpretation of the symptom it may be less frequently mistaken, and I would urge that the condition of the arteries and the heart be made an object of early and thorough investigation in every instance where obscure vertiginous attacks, or a persistent giddiness is present.

³ Du Vertige Cardio-Vasculaire, Paris, 1890.

⁴ Traité des Maladies du cœur et des Vaisseaux.

MALARIAL EPILEPSY.¹

BY EUGENE W. HILL, M.D., WEST ROXBURY, MASS.

TWENTY-ONE years ago Echeverria, in the preface of his work, stated "It does not claim to offer any new discovery . . . still less is it designed to be an English treatise on epilepsy." I have attempted to meet a deficiency in my own knowledge by comparing the cases I have carefully noted. How far these notes may meet the wants of others remains to be seen. The foregoing expresses the object of this paper.

I have selected from my notes two cases of malarial epilepsy, with some observations as to the prognosis of epilepsy in general as modified by treatment, which I submit for your approval.

CASE I. M. F., a boy, eighteen years of age. Parents dead; father from alcoholism, mother from phthisis. Patient was never mentally at par, and for a year after birth had periods of dulness lasting several days during which he was morose and sleepy. At school, he was not apt, and was withdrawn early; being of slender physique and in indigent circumstances, he remained at home without education, employment or medical assistance. Under this routine, he gradually became morbid and melancholic. Two years ago he was attacked by the tertian form of intermittent fever, responding readily to treatment. Hygienic measures and anti-malarial treatment were instituted for two or three months. Under this stimulus he improved mentally and physically, and for a year suffered from no ailment of any kind until he was seized by malarial fever of the same form, beginning with a twenty-five-minute chill; the second day he remained in bed, with normal temperature but irregular pulse; at time of expected chill on the following day a convulsion occurred, followed by others. Medical assistance for this seizure was not until then summoned. I found him unconscious, convulsions occurring every five or six minutes, beginning locally by twitchings in the right hand extending up the muscles of the arm, followed by rotation of the eyes and head over the left shoulder, with a general epileptic paroxysm. The face during the quiet interval was flushed and hot, but became livid during the spasm. The temperature was difficult to follow from the rapidity of the convulsions, but rose to about 104° in the interval, and from 104.5° to 105° during latter part of the paroxysm; the usual depression seen before a normal epileptic explosion I was unable to obtain; the pulse was irregular, weak, bounding from 80 to 140 and over. Gradually perspiration appeared on the forehead and upper extremities of a cadaveric odor, the temperature fell gradually to 100° between, and 101° during the paroxysm, the urine was passed involuntarily, nearly colorless in character. The epileptic status still continued showing no change or diminution of vigor with falling temperature and profuse perspiration as compared with the previous condition of high temperature, flushed face and dry skin. For five hours they averaged four to eight per hour. Chloroform and nitrate of amyl controlled them slightly, but one-fiftieth of a grain of nitro-glycerine (two drops, one per cent.), dropped on the tongue every twenty minutes caused a gradual cessation in course of an hour, during which bromides were administered with quinine hypodermatically. Nevertheless, the paroxysms again returned and continued until death in the morning.

¹ Read before the Norfolk District Medical Society, January 29, 1892.

CASE II. F. K., a boy, aged nine, strong and hardy. Parents living; no hereditary history of any disease; three sisters all in good health. In April, 1890, he suffered from intermittent fever, beginning with a chill at 4 A. M. Forty-eight hours later had an attack commencing at midnight, ceasing at 7 A. M., about twelve paroxysms, but did not bite his tongue.

In May, 1891, one year later, suffered from malarial intermittent fever as before. On third day, at time of expectant chill, was seized with convulsions to the number of fifteen. Bromide amyl pearls and chloroform failed to give results which followed use of nitro-glycerine as in previous case. The paroxysms recurred in spite of treatment every other day for ten days, but diminishing in number and severity. The temperature gave the same rise and fall as in Case I, but never ascended above 103°. The scalp remained very tender for several days. The patient was still subject during the autumn, about once a month, to nocturnal attacks preceded twenty-four to thirty-six hours by malaise, nausea and vomiting. The attacks are readily aborted by quinine, bromides and calomel.

These cases are the result of malarial fever in New England; during the years 1880 and 1884 forms of malarial fever appeared in Massachusetts of sufficient frequency to claim the attention of the State Board of Health. In the latter part of 1885 and beginning of 1886, they were epidemic in character at South Framingham, disappearing from its previous localities, spreading along the course of a small stream (Beaverdam Brook) to Natick. Since 1886, it has disappeared entirely from South Framingham, and became prevalent along the Charles River through South Natick, Wellesley, Dover, Watertown, and the Newtons. In South Natick and Dover, the location of the cases reported, malarial fever prevails with greater severity than in any portion of the valley, scarcely any resident escaping during the summer and fall seasons.

Malarial epilepsy has been recognized from early times of medicine. Hippocrates clearly refers to epileptic fevers (*febres comitiales*) and their greater frequency during the spring and autumn months (*Echeverria*). According to modern authors, it is rare. The literature examined shows reports only by

Lowe and Paine: *Indian Annals of Medical Science*, Calcutta, 1860-61, vol. vii, p. 597, *et seq.*

Hansfield Jones: *Clinical Observations of Functional Nervous Disorders*, 1868, p. 139.

Echeverria: *Epilepsy*, 1870. Two cases.

Mackay: *Edinburgh, Eng.* One case in detail.

Jacobi: *Hospital Gazette*, New York, 1879, pp. 41-43. One case.

Hamilton: *Pepper's System*, vol. v, p. 472. Three cases.

Hammond: *Nervous Diseases*, 1891, 7th edition. Seven cases as a cause (?).

Ferreira: *Archivo Italiano di Pediat.*, 1889.

Ferreira finds four varieties of cerebral form of malaria seen in children during the heated season: (e) the eclamptic, (2) the comatose, (3) the delirious, (4) meningitic. The last two were observed in older children.

Meigs,² Pepper² and Lewis Smith³ hold that it is not unusual for malarial fever to be ushered in by a convulsion taking the place of a chill; and in 1882 the *North Carolina Medical Journal* stated, editorially, "there is no more fatal disease in children in the malarial districts of the South than malarial eclampsia."

² Local citations.

³ *Diseases of Children*, vol. iv, page 285.

Dr. Smith, however, says he is surprised at the immunity of epileptics from infantile convulsions.

Dr. Morris J. Lewis,⁴ with ten years' experience at the Dispensary of the Children's Hospital, Philadelphia, has failed at that parallel to note such fatal results from malarial poison as seen in North Carolina; and in New England, malarial fever, I believe, does not show any such convulsive substitution.

It is interesting to note — already mentioned — that the convulsions continued unchanged with unremitting energy under three entirely different conditions, namely, the three stages of an intermittent fever; (2) the temperature rose with the close of each paroxysm, but fell in the quiet interval to the fever level, and did not show the abrupt, rapid and successive rise which occurs in eclampsia;⁵ (3) the success of nitro-glycerine, as an epileptic status, over bromides, chloroform and nitrate of amyl, especially in those cases characterized with a large flow of pale urine, and which is in accord with the observations of others.

Clinical Department.

A CASE OF INFLUENZA WITH ERUPTION.¹

BY CAPT. S. G. ROBINSON,

Medical Department United States Army, Fort du Chesne, Utah.

LOUIS SCHEAR, white, age nineteen, laborer, was admitted to the post hospital at Fort Du Chesne, Utah, on March 28th, with the following history: With the exception of measles fifteen years ago, and typhoid fever one year ago, has always been strong and well. Has worked in the Park City mines, but has never had any symptoms indicating lead poisoning. Was taken sick seven days before admission with headache, severe pains in the calves of the legs, slight chilly sensations, fever, slight cough, marked muscular weakness and loss of appetite, two days after which an eruption appeared which even when first noticed was universal. Has taken no medicine.

When admitted, he had a temperature of 101.5° (which rose that afternoon to 103°), a pulse of 120, a slight cough, no coryza or conjunctivitis. Over the whole body, but most abundant on the legs, where it was deeper in shade, was an eruption of reddish spots from one-half to two millimetres in diameter, irregularly circular, coalescing in a few instances, elevated just enough to be perceptible to the touch, not exclusively associated with hair follicles, without special arrangement, not itching, and which fourteen days after its appearance—gradually faded without desquamation. On the hard and soft palate, were similar spots, with such modifications in appearance as might be expected from their seat. It was also visible on the palms of the hands. Epitrochlear and inguinal glands to be felt. On the knuckle of the right ring-finger was a slight abrasion surrounded by a parchment-like induration. This came, the patient said, from a burn received the day before he was taken ill. It disappeared without treatment. No oedema of legs or swelling of joints. Some sub-sternal soreness on coughing, but no tenderness on percussion. Tongue coated, bowels constipated, urine scanty and depositing urates, but otherwise

¹ Published by authority of the Surgeon-General.

⁴ Keating: *Diseases of Children*, vol. iv, page 876.

⁵ Bourneville: *Archives de Tocologia*, tome ii.