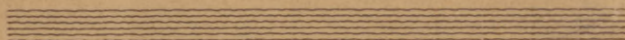


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On the
Diagnosis and Treatment of Apoplexy.

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CLINICAL NOTES ON THE DIAGNOSIS AND TREATMENT OF APOPLEXY.

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THESE notes are based on the study of thirty-one cases seen in my service at the City Hospital. With one or two exceptions the cases were seen in the acute stage, the time varying from a few hours to a few days after the onset of the hemorrhage. Of the thirty-one cases, twenty-six were males and five females, an undue disparity since no traumatic cases are included in the list and must be explained on the ground that men are far more apt to be brought to hospital than women.

Twenty-seven were white, four were negroes. In regard to the age of the patients: Three cases occurred under 20 years; none between 20 and 30; four between 30 and 40; five between 40 and 50; ten between 50 and 60; four between 60 and 70; and two over 70. Syphilis and rheumatism were the prevailing diatheses and atheroma, or arterio-sclerosis, was commonly met with. In three cases there was a history of one of the parents having been hemiplegic. The paralysis occurred on the right side in 16 cases, on the left in 13; in two cases there existed an old hemiplegia on the side opposite the recent paralysis. Aphasia was present eight times. General sensibility was abolished or greatly impaired on the paralysed side in seven cases, muscular sense was lost in four cases. No careful observations were

made as to temperature sense, which was noted as lost in one case. In ten cases there was loss of consciousness when admitted into the hospital. Slight elevation of temperature was common, but in only two cases was there very marked elevation. Facial paralysis occurred eleven times. General convulsions were seen in three cases; local spasms and twitchings were very frequent. In no case was there marked deviation of the head and eyes. The pupils presented no constant change; sometimes they were contracted, sometimes dilated, more often normal; in only one or two cases was there marked difference between the two. Marked ptosis was seen three times, and occasionally diplopia.

The diagnosis of apoplexy, especially in hospital cases, is by no means always easy. While there are a number of conditions, which more or less closely resemble the coma of intracranial hemorrhage, the most important are alcoholism, uremia and opium poisoning, in the order named. There are no symptoms that may be said to be absolutely differential. High temperature and unequal pupils favor apoplexy, but neither of these symptoms is constant. Conjugate deviation of the head or eyes, facial paralysis, or hemiplegia, stertorous breathing, full, strong pulse, rigidity,

convulsions, with loss of consciousness, are among the most important diagnostic symptoms of apoplexy. In regard to the temperature, there is at first, that is for the first few hours, a fall amounting to one or two degrees, then a rise of one or two degrees; in fatal cases the rise is often four or five degrees or even higher, and this is an important prognostic sign. Convulsions are not apt to occur unless the hemorrhage involves the cortex or corpus striatum. Comparing these general symptoms with alcoholism we find that as a rule the coma of alcoholism is much less profound than in apoplexy; the delirium of alcoholism is apt to be much more violent, evidences of vomiting are frequently present, respiration is not as labored, and the pulse is not so full and is more rapid. Convulsions are practically never seen in alcoholism. In uremic conditions the coma is less profound than in either of the preceding states, the temperature is apt to be depressed, convulsions are very common, and albumen is present in the urine. Stertorous breathing is not present, or at least not marked as in apoplexy, and there is usually œdema present. In opium poisoning the coma is not as marked as in apoplexy, it generally being possible to arouse the patient, the pulse and respiration may be characteristically slowed, and convulsions rarely occur.

The various symptoms detailed above are by no means all the symptoms met with in the respective conditions, but are merely the more prominent ones. In regard to the rise of temperature in apoplexy, we see that it does not come on in the first stage, and is by no means a certain accompaniment of the later stages. Its value is very considerable as a positive, but very slight as a negative, symptom. The nature of the coma and the character of the delirium differ in the four conditions, but differ mainly in degree. The state of the pupils is not constant in any one of the conditions in question. It is a matter of remark how often the pupils show no very marked change in opium poisoning; and the same may be said of pulse and res-

piration. Convulsions are not seen in alcoholism, but are not unfrequent in apoplexy, are very common in uremia, and may occur in opium poisoning; in a case of the latter affection seen not long ago there were marked convulsive seizures. The smell of alcohol on the breath is not worth much as a diagnostic sign; in the first place it is too much of a normal symptom, unfortunately, to be placed in evidence, and in the second place the alcoholic subject is especially liable both to uremia and apoplexy. The same may be said in regard to the appearance of albumen in the urine; a subject with arterio-sclerosis is apt to have albuminuria, and very prone to rupture of the diseased arteries and apoplexy. A safe rule in doubtful cases is to use the soft stomach tube, which can do no harm, and if there be any opium still unabsorbed it is gotten rid of, and if there be a large amount of alcohol in the stomach the removal of it is very desirable. It must be borne in mind that whiskey is the universal medicine and is most indiscriminately administered, so that the smell of it on the breath may lead to very false conclusions as to the habits of the patient. The symptom that is worth most in distinguishing apoplexy from the other conditions named is paralysis. Where there is marked facial paralysis, the nature of the case is at once apparent. In the acute stage, however, during the period of coma, it is generally very difficult, and often impossible to be at all sure of the presence of paralysis, unless there is at the same time involvement of the facial nerve. The limbs may be rigid or entirely limp, and prolonged watching may fail to detect any difference in the movements of the two sides. A procedure, which is not generally laid down in the books, but which I have found very valuable, is to test the limbs carefully with a pin. In alcoholism, unless it be very profound, in uremic conditions and in opium poisoning, it is nearly always possible to elicit the same response from the two sides. In intracranial hemorrhage with hemiplegia, one can often demonstrate that paralysis exists upon one side. Sometimes the para-

lysed limb will respond very slightly, sometimes not at all. Again it often happens that, as in the frog from which the cerebral hemispheres have been removed and one side forcibly restrained, the sound limb will reflexly attempt to remove the irritation from the other side. It is evident that there are no symptoms that are constant and differential, and it follows that each case must be studied with the utmost care and the diagnosis arrived at from the *tout ensemble*. A reliable history, if it can be obtained, will of course often clear the case up. The sudden onset, with perhaps a traumatic history, points to apoplexy, while in the other conditions coma comes on gradually, and in the case of uremia usually preceded by rather than in advance of the convulsive seizures.

It happens now and then that hysteria is mistaken for apoplexy, and *vice versa*, though as a rule there is no difficulty in making the diagnosis between the two conditions. I saw once in consultation a case that had been diagnosed hysterical lethargy; the patient was an hysterical woman who had for some years been the subject of almost all forms of this protean affection, and among other symptoms had frequently had attacks of hysterical lethargy. The pulse and respiration were suggestive rather of intracranial hemorrhage than of hysteria, and the thermometer showed a temperature of 103°; a diagnosis of apoplexy was made, and an unfavorable prognosis given, based on the fact that the condition had lasted for twenty-four hours and the temperature was still high; death occurred in twelve hours. A negro woman was recently brought into the City Hospital by the police with an indistinct history of convulsions and unconsciousness; she was anesthetic, the limbs were rigid and every effort was made to arouse her to consciousness without avail. At last as an experiment I closed the eyes, which were partly open, and made the suggestion of sleep. In a few minutes she was hypnotised, and the suggestion was made that she would be all right when she waked up. This suggestion was re-

peated a number of times and she was then wakened, and at once jumped up with the somewhat characteristic expression, "Where am I at?"

The limits of this paper do not permit any discussion of the difference between hemorrhage and embolism and thrombosis, a difference, by the way, that is of no great interest to the general practitioner. For the same reason nothing can be said concerning the localization of the hemorrhage; while a number of the cases here reported went to autopsy, space does not allow any detailed account of them, and there were not enough cases from which to draw any general conclusions.

In regard to the treatment of apoplexy, more might be done in the prodromal stage if this condition were more carefully studied, and oftener recognised. There are no constant or certain prodromata, but in a considerable proportion of the cases here related, the history obtained afterwards from the patients showed the existence of headache, vertigo or a sense of fullness in the head, numbness of one side, etc. These symptoms in some instances existed for a week before the apoplectic attack. It is very important to heed these warnings, especially in cases where there is atheroma of the vessels, or where there is high arterial tension without atheroma. Rest, vascular sedatives, nitroglycerine, large enemata, will often modify the force of the circulation, and thus tend to avert the rupture of the artery. Some years ago I was called to see an elderly woman, stout, with flushed face, headache, and unusually high arterial tension. While waiting for the family physician, she was kept absolutely quiet, with ice to her head. While we were consulting in the next room, the patient, against orders, got up to use the commode, the arteries could stand no further strain, rupture occurred, and she died in half an hour with all the symptoms of intracranial hemorrhage. Venesection would probably have averted this disaster. It rarely happens that the physician sees cases early enough to make use of blood-letting. After the rupture of the artery has taken place, it

is doubtful whether venesection does any good. The most important part of the treatment of apoplexy is rest. There is no way by which the bleeding can be stopped, and it is probable that in the great majority of cases the increased intracranial pressure tends to control the hemorrhage. The ruptured artery, or miliary aneurism, is small as a rule, and it is generally soon occluded by clot. If the amount of hemorrhage is moderate and not in a vital part of the brain, recovery, more or less complete, will take place if the clot remain in its first position.

Very often it happens that the original location of the clot was not specially dangerous, but from gravity, or as the result of exertion, the clot has forced its way through the soft brain tissue and done irreparable injury to more important structures. This can often be seen post-mortem and the track of the clot made out. From this it follows that the greatest care should be exercised to prevent any more moving of the patient than is absolutely necessary. If it be possible the patient should be laid down on a sofa or mattress in the room where the attack occurs, and no attempt at movement made for 12 or 24 hours. It is better to slightly elevate the head by pillows, since this probably tends to modify the force of the heart's action in the cerebral vessels, and at the same time allows respiration to be carried on rather better than when the patient is perfectly flat. Opening the skull has been resorted to, but it is doubtful whether this is advisable except in the case of meningeal or cortical hemorrhage. The ice cap to the head is of some use in allaying restlessness, and is ex-

tremely good treatment for the relatives and friends. In regard to drugs in this early stage, there are practically no therapeutic indications that can be successfully met. The use of ergot and that class of remedies is of more than doubtful propriety. Aconite may sometimes be used to advantage in controlling a too forcible heart's action. As soon as the patient can swallow it is my custom to administer a mixture of bromide and iodide of potash, 30 to 40 grains of the former and 10 grains of the latter, and this is kept up for several days, then the bromide is omitted and the iodide used alone in increasing doses. I am confident that this treatment has been of service in my hands. In regard to the custom of administering croton oil or some drastic purge during the early stage, although sanctioned by almost immemorial usage, it is not only useless, but exposes the patient to the risk of making dangerous exertions, besides putting him in a filthy condition. The same objections in part apply to blistering, and the use of mustard. It is important to attend to the bladder, and draw off the urine at regular intervals. The throat should be kept as free from mucus as possible, and the surroundings of the patient rendered comfortable. These points have perhaps been dwelt upon with unnecessary minuteness, but one so often sees these cases handled in a mischievous manner. The physician, realizing the futility of any active treatment, is too apt to yield to any suggestion made by the family, and the object of this paper is to insist upon a simple and rational treatment of this condition.

