Two Cases of Ingravescent Cerebral Hemorrhage Treated by Ligation of the Common Carotid Artery.

BY

F. X. DERCUM AND W. W. KEEN.
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Case I.—Dr. Dercum was called in consultation with Dr. T. Stanton Crowley to see J. W., at 50 years, on Wednesday evening, February 14th. Dr. Crowley furnished the following history:

Mr. W. about eight o'clock in the morning of the previous Sunday (February 11th) had experienced a slight weakness of the left arm. He paid no attention to this until evening, when he noticed also a slight weakness of the left leg. The patient became alarmed. Dr. Crowley being summoned, promptly and thoroughly applied wet cups to the back of the neck, administered a vigorous purgative and, later on, bromides with ergot. Notwithstanding this decided treatment the patient's hemiplegia had grown slightly more marked by Monday morning. The condition persisted with but slight change throughout Monday, but on Tuesday another decided increase in the amount of palsy was noted. From this time on the condition grew gradually and steadily more marked until Wednesday evening, February 14th. At this time there was complete motor palsy of the left arm and very decided palsy of the left leg and also paralysis of the lower half of the left face. In addition the pupil upon the right side seemed a trifle larger than that upon the left. This last fact, however, the patient maintained was usual with him and that it had always existed. There was no paralysis of sensation. Patient had a dull feeling in head, but no decided headache. Slight giddiness was also present. There was no mental disturbance whatever, the man being perfectly clear and rational. There was at no time any somnolence or stupor. An examination of the heart resulted negatively though the blood vessels at the wrist and temples appeared slightly atheromatous. The urine revealed specific gravity of 1.018 together with a minute quantity of albumen; otherwise negative. The possibility of embol-
ism, thrombosis or ingravescent hemorrhage was now considered with the probabilities distinctly in favor of ingravescent hemorrhage. Owing to the progressive character of the symptoms interference of some kind seemed urgently indicated. It will be remembered that Mr. Horsley, in his experiment upon the brains of monkeys, noted that he could readily control hemorrhage from the basal ganglia and capsules by ligation of the common carotid artery, and in consequence of this he suggested ligation of this vessel as the treatment for cerebral hemorrhage in man. Ligation of the common carotid upon the right side was proposed to the patient, who at once gave his consent.

Prof. W. W. Keen was then called in and at eleven P.M. ligated the right common carotid. Inasmuch as we feared that an attempt to secure anesthesia by the administration of ether might be accompanied by a sudden increase in the hemorrhage cocaine was used locally. The patient bore the operation remarkably well and passed a comparatively comfortable night. On February 15th, the next day, he was again examined at eleven A.M., Drs. Dercum, Keen and Crowley being present. The course of the paralysis, which before ligation had been steadily progressive, had evidently been arrested. Little or no change beyond this had taken place in the patient's condition, save a doubtful and slight return of power in the muscles of the left shoulder and upper arm and an equally doubtful improvement in the movements of the left leg. February 16th, 10.30 A.M., a very appreciable improvement in the condition of the arm was noted, the patient being able to slightly move the fingers. Decided improvement was now also noted in the movements of the leg, the latter being more readily abducted, flexed and extended.

On February 19th, 10.30 A.M., it was noted that the improvement before observed was continued, movements of the hand and fingers, upon arm and shoulders in all directions being much improved. Extension and flexion of the fingers more marked than before. This is also true of the movements of the hand at the wrist, forearm also more readily flexed and extended and muscles of shoulder and upper arm move comparatively freely. Patient now passed from observation until April 23, 1894. There was now present very slight dragging of the left leg, the latter was distinctly though very slightly spastic, tendon jerks of arm and leg on left side plus as compared with the right. Slight droop
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of the left angle of the mouth. The patient has, however, good control of the muscles of the lower half of the left face. Dynamometer registered by the right hand sixty, by the left hand thirty. No anaesthesia. Pupils slightly unequal, the right being a little larger than the left. Both reacted normally. Mentally, the patient was clear, bright and cheerful. The above case is an exceedingly instructive one. It is, of course, impossible in a given instance to make more than a probable diagnosis. However, the course and progress of the paralysis together with the absence of grave mental symptoms, such as somnolence, stupor, coma, distinctly pointed to a progressive capsular hemorrhage rather than to a gross and extensive cortical suffering. Further, in the distribution of the paralysis also the clinical picture resembled more closely hemorrhage than embolism or thrombosis. Being fully alive to the difficulties of an absolute diagnosis and yet feeling that the probabilities pointed strongly to ingravescent hemorrhage, we decided not only that the operation, not adding in any event to the danger, was in reality urgently indicated. If we were correct, as I firmly believe we were, Mr. Horsley’s expedient enabled us to save at least one human life, cases of ingravescent hemorrhage being notoriously fatal.

Case II.—Mr. B., middle aged man, was attacked by weakness of the left arm about two o’clock in the afternoon of June 6, 1893. The weakness became gradually more and more marked and by evening had involved the leg and to some extent the face. Late in the day he was seen by his family physician, Dr. Crowley, who summoned Drs. Keen and Dercum in consultation. Cerebral hemorrhage, ingravescent in character, was diagnosed and preparations were at once made ligaturing the right common carotid. The paralysis had gradually deepened so as to be almost complete, and unconsciousness also had supervened before the operation could be performed. However, it was successfully carried out about ten o’clock in the evening. Owing to the patient’s condition no anaesthetic was administered. He failed, however, to rally, no change in his condition was noted and he survived but a few hours.

It cannot be said that the expedient of ligaturing the carotid had in this case been given a fair trial. The hemorrhage, though beginning slowly, had with each hour become more extensive; that is, judging from the symptoms, and the operation was obviously performed too late to do any good: