No.	Date.	Place of Operation.	Condition.	Age.	Length of Incision.	Adhesions.	Treatment of Pedicle.	Weight of Tumor.	Result.	Remarks.
70	Nov. 15, 1881.	Boston.	W.	47	3½ in.	None.	Tied and burnt off with Paquelin's thermo-cautery.	25½ lbs.	Recovery.	
71	Nov. 19, 1881.	Concord, N. H.	W.	73	6 in.	To peritoneum, omentum, and intestine.	Do.	20 lbs.	Recovery.	The age of the patient did not prevent a very rapid recovery, 99.4° F. being the highest temperature.
72	Dec. 1, 1881.	Provincetown, Mass.	M.	52	6 in.	Burst cyst.	Do.	35 lbs.	Recovery.	Abdomen filled with gelatinous material, — colloid, — which had originally come from a burst dermoid cyst.
73	Dec. 18, 1881.	Free Hospital for Women.	S.	30	7 in.	To intestine and pelvic peritoneum.	Do.	10 lbs.	Death.	Both ovaries removed. The outer surfaces of the tumors of a brown color, and beginning to decay.
74	Jan. 30, 1882.	15 Louisburg Sq., Boston.	M.	27	umbil. to pub.	Omental.	Tied and burnt off with Paquelin's cautery.	18 lbs.	Recovery.	Dermoid cyst.
75	Mar. 14, 1882.	Boston.	S.	43	8 in.	Omental and peritoneal.	Do.	25 lbs.	Recovery.	Died two months later of a recurrent tumor.
76	Mar. 19, 1882.	15 Louisburg Sq.	M.	50	5 in.	None.	Do.	15 lbs.	Recovery.	
77	Mar. 20, 1882.	15 Louisburg Sq.	W.	45	—	Parietal and rectal.	Do.	45 lbs.	Recovery.	Sixty pounds of cystic fluid removed by tapping a few days before operation in order that the patient could be moved to the city.
78	Mar. 25, 1882.	15 Louisburg Sq.	M.	45	6 in.	None.	Do.	13 lbs.	Recovery.	
79	—	15 Louisburg Sq.	M.	25	4 in.	To uterus.	Do.	13 lbs.	Recovery.	Dermoid cyst.
80	April 4, 1882.	Lancaster, Mass.	S.	32	3 in.	None.	Do.	32 lbs.	Recovery.	
81	April 10, 1882.	Boston.	S.	15	3 in.	None.	Do.	34 lbs.	Recovery.	Dermoid cyst.
82	April 12, 1882.	Carney Hospital.	M.	32	6 in.	Omental and parietal.	Do.	10½ lbs.	Recovery.	Whether the tumor was ovarian or uterine was not ascertained till after the abdomen was opened.
83	April 19, 1882.	15 Louisburg Sq.	S.	23	3½ in.	None.	Do.	24½ lbs.	Recovery.	Cyst of the right broad ligament.
84	April 20, 1882.	15 Louisburg Sq.	S.	28	3½ in.	Anteriorly to peritoneum.	Do.	24 lbs.	Recovery.	
85	April 22, 1882.	15 Louisburg Sq.	M.	59	From above umbil. to pub.	None.	Do.	23½ lbs.	Recovery.	Tumor a semi-solid myxoma.
86	April 22, 1882.	Jamaica Plain.	M.	39	Do.	Parietal.	Do.	14 lbs.	Death.	Of heart disease on fifth day. Tumor semi-solid sarcoma.
87	April 23, 1882.	Carney Hospital.	M.	48	4 in.	None.	Do.	22 lbs.	Recovery.	
88	April 29, 1882.	15 Louisburg Sq.	M.	60	From above umbil. to pub.	To ascending colon and to parietes.	Do.	11 lbs.	Recovery.	Adhesions between colon and cyst separated with difficulty.
89	May 5, 1882.	East Boston.	M.	47	3½ in.	None.	Do.	39 lbs.	Recovery.	Cyst of the left broad ligament.
90	May 13, 1882.	15 Louisburg Sq.	M.	41	6 in.	Omental, intestinal, and pelvic.	Do.	12 lbs.	Death.	Seventy pounds ascitic fluid. Drainage tube put in. Died on the tenth day.
91	June 5, 1882.	15 Louisburg Sq.	M.	64	4½ in.	Pelvic.	Do.	7 lbs.	Recovery.	
92	June 12, 1882.	15 Louisburg Sq.	S.	24	4½ in.	None.	Do.	24 lbs.	Recovery.	
93	June 14, 1882.	15 Louisburg Sq.	M.	51	4 in.	None.	Do.	26 lbs.	Recovery.	
94	June 15, 1882.	15 Louisburg Sq.	S.	14	3½ in.	None.	Do.	6½ lbs.	Recovery.	Dermoid cyst.
95	June 19, 1882.	15 Louisburg Sq.	S.	42	3½ in.	None.	Do.	25 lbs.	Recovery.	
96	June 22, 1882.	Carney Hospital.	S.	22	6 in.	None.	Do.	5 lbs.	Recovery.	Dermoid cyst.
97	June 27, 1882.	Annisquam, Ma.	M.	37	5 in.	Parietal and omental.	Do.	5 lbs.	Recovery.	Twenty pounds of pus in cyst. Temperature 101° F. before operation.
98	July 8, 1882.	15 Louisburg Sq.	M.	22	3½ in.	Omental.	Do.	16 lbs.	Recovery.	
99	July 10, 1882.	15 Louisburg Sq.	M.	29	6 in.	Universal.	Do.	30 lbs.	Recovery.	Two arteries near aorta in left lumbar region were with difficulty tied.
100¹	Aug. 16, 1882.	15 Louisburg Sq.	S.	24	3½ in.	None.	Do.	25 lbs.	Recovery.	Cyst of the left broad ligament.

CEREBRAL ANÆMIA AND EXHAUSTION.²

BY S. G. WEBBER, M. D.

AMONG the conditions of the brain most difficult for diagnosis are those in which there is irregular blood supply. Irregular supply of blood necessitates irregular or deficient nutrition. A badly nourished brain is irritable. Jaccoud states this well: "Under the influence of anæmia and of insufficient nutrition the excitability of the nervous elements is diminished, that is to say, its effects are less energetic, and exhaus-

tion is more rapid; but by reason of the diminished vitality of the cells this excitability is aroused by very slight causes, which in health produce no reaction. The abnormal condition is, then, double: on one hand the reaction is weak and of short duration; on the other it is produced by impressions which ought to have no effect. This double condition can be well expressed by the term irritable or excitable weakness."

This condition is found in all cases of illy nourished brains, whether the defect is due to a blood supply deficient in quantity or in quality, or whether it may arise from an excessive supply of blood interfering with the nutrition; the same condition may also arise from exhaustion due to overwork of the nerve cells, the supply of blood being nearly normal, normal I mean in

¹ Total 100 ovariectomies; 87 recoveries; 13 deaths. This is about as well as I can do, unless I refuse the desperate cases. J. H.

² Read before the Boston Society for Medical Observation, March 6, 1882.

comparison with the work required of the brain. As all these conditions lead alike to defective nutrition of the brain, it is to be expected that many of the symptoms to which they give rise will be the same in one as in another condition. Thus the headache, vertigo, nausea, found in congestion is also found in anæmia; the excitement, delirium, hallucinations, etc., found in hyperæmia are also seen in anæmia. Also these same symptoms may be the expression of exhaustion or of poisoning of the blood.

I do not expect to consider all the conditions to which I have alluded above, but desire to call attention to a few cases in which the symptoms have arisen from a combination of depressing agencies, and where, apparently, the result is due to anæmia and malnutrition from deprivation and exhaustion. Much has been written about hyperæmia, and great stress has been laid upon too much blood flowing to the brain. Perhaps there are patients in whom this condition exists, and yet in by far the majority of patients I believe the explanation of the symptoms is to be found in malnutrition from insufficient supply of food, or from inability to assimilate the food taken, or from exhaustion due to over-use, with too short periods of rest, or from the inferior quality of the blood.

In such cases as I propose to relate I have been in the habit of referring the symptoms to anæmia, though they are probably not caused by simple anæmia; sometimes there is probably anæmia as the ordinary condition; the irritable brain may temporarily receive a relatively increased supply of blood, though its nutritive quality or its amount may be below that appropriate for health; owing to the abnormal irritability of the brain this excess over the usual supply is sufficient to cause excitement. This would be only a temporary and perhaps local increase of blood supply in an anæmic brain, and should not influence either the diagnosis or treatment.

From what has just been said it is easy to explain the periods of excitement succeeding and followed by seasons of great depression. There is not time to give examples of all classes of cases which might be included among those of anæmia and exhaustion.

The following illustrate some of the effects of insufficient feeding and privation.

CASE I. The first was Hannah M., about thirty-five years old. She was found on examination to have phthisis far advanced; she had suffered from insufficient food, had been confined two weeks previous, and had lost considerable blood. She had been somewhat delirious, and the night before she was seen had tried to beat her husband with a chair. She had headache, and felt cold. Little or nothing could be learned from the patient, as she seemed decidedly stupid and uncommunicative. She had had several loose, greenish stools daily. The pulse and temperature were both high, as might be expected from the advanced phthisis from which she suffered. She was fed frequently, the direction being given that she should have all the milk she would take, and in a short time she was given solid food. A bad diarrhoea somewhat retarded recovery, but she finally recovered from the maniacal excitement.

CASE II. The next case, A. E. M., was a married woman, about thirty-five years old, who had had charge of an extensive business. Once she had been in the habit of using morphia, but had given it up. Shortly before entrance to City Hospital she had been greatly

overtaxed by business and other cares, had made long days, eating sparingly, taking much less food than she needed, and had used strong liquors to keep her up; sometimes she took as much as a pint of brandy a day. For three or four weeks she had been noticed to act queerly at times, and for a week before entrance was under the care of a homœopath, who, it was said, allowed her only water Indian gruel for nourishment. On entrance she had delusions, heard and saw imaginary persons, was in communication with spirits and mediums, listened to the statements of a dying girl, then fell back on the pillow speechless and motionless when the girl died. She had not slept for some nights. Bromide of potassium and chloral, thirty grains of each, were given, and she had a good night's rest, though the dose was repeated at midnight. She objected to food, as the "medium" had told her to take nothing but the water gruel, but on the next day after admission the house officer persuaded her that the medium was mistaken, and she ate a hearty meal, saying that she had been hungry for a week. Under feeding and quinine she rapidly lost her delusions and hallucinations, and in a week could talk sensibly about them, slept all night without a hypnotic. She was very weak, and regained strength only slowly.

In this case, if the statement in regard to the strict dieting previous to admission can be depended upon, it is quite likely that hyperæmia was suspected, and she was treated accordingly, with very unfortunate result in causing a decided aggravation of the symptoms. The symptoms were entirely unlike those of delirium tremens.

CASE III. Mary R., aged twenty-nine, was deserted by her husband, and had very little to eat for some months, going sometimes two days without eating. She was in the fifth month of pregnancy. One week before entrance she felt sick, and began to act queerly. She had some convulsions before entrance, and about fifteen minutes after entrance had one; the spasm was most in the upper part of the body, and bilateral; legs were only slightly affected; head and eyes were drawn strongly to the right; arms were drawn across the body, and fore-arm flexed; once the mouth was drawn to the left; respiration was quiet and natural; pulse normal; temperature 98.5° F.; no albumen in urine. Her face was slapped sharply, and the convulsions ceased; she was taciturn.

Two grains of valerianate of zinc three times a day, and a plentiful supply of food were ordered. In a few days she was entirely natural in her appearance, but a headache persisted for a few days. She was discharged well in about a month.

These three cases are sufficient for illustration. The first patient had been in an unfavorable condition for a considerable time. The loss of blood at confinement seems to have been sufficient, with the other depressing influences, to give rise to such cerebral disturbance as would not have arisen in a patient otherwise healthy. It was virtually a case of acute anæmia of which hæmorrhage was the last ætiological condition. This was the only case in which there was a rise of pulse and temperature above the normal. The phthisis was the cause of this rise. In the other cases the pulse and temperature were either normal or just below normal.

The second case was not one of delirium tremens, though indulgence in spirit may have been one element in the production of the disease. There was no

tremor, no vision of repulsive objects, no terror; the case was considered outside as one of mania, and it was thought that it would be necessary to send her to an asylum. Yet here there was deprivation, voluntary, not enforced; she taking only a little tea and toast irregularly for meals, and keeping herself up by stimulants. Stimulation was probably one element in the ætiology, but not to such an extent as to justify calling the patient's condition alcoholism.

The third case was one in which similar causes acted, but there were convulsions of an hysterical character. The patient recovered under the same course of treatment. As the patient's condition of life and circumstances were those of great privation, and while pregnant and needing a generous supply of food she had insufficient, it is reasonable to include it under the same head with the others. Call it hysteria if it seems best; then it is hysteria due to cerebral anæmia.

This third case illustrates well the necessity of inquiring into the patient's previous history before forming a diagnosis.

All these patients had been suffering from depressing influences, and finally, for a comparatively short time, from an increase of these, either a hæmorrhage or an enforced abstinence from food; they were suffering from a comparatively acute anæmia resembling that seen after severe hæmorrhages or starvation in persons previously entirely well.

Another class of patients are met who are for a longer period exposed to depressing influences; who are overworked, underfed, who finally exhibit nervous symptoms of a most varied type. Many of these patients have such a combination of symptoms referable to the head and brain that they are seriously concerned for their mental integrity, fear apoplexy, etc. Once in a while the patients with such symptoms seem to have hyperæmia of the brain, but much the larger number whom I have seen are simply suffering from insufficient nutrition of brain, owing either to general anæmia combined with overwork, or to overuse of the brain, and consequently such exhaustion that the brain has been unable to recover its normal vigor. In these the morbid condition arises from a more slowly acting cause, and, as might be expected, the symptoms differ from those found in such cases as the above. There is less excitement, more evidence of depression and exhaustion. The following summary of such a case may serve by way of illustration:—

A clergyman had been overworked with the care of a large church and congregation, holding extra meetings; during this feeling of depression no anxiety nor despondency were noticed. Notwithstanding a vacation and partial rest he had several attacks of headache, could not study well, was dissatisfied with his work, and obliged to give it up. His brain was easily fatigued, and refused to work. There was no flushing of face, no vertigo, no symptoms excepting those briefly sketched. There was here chronic exhaustion.

— At the public exercises in connection with the bi-centennial anniversary of the old Manor Hall at Yonkers, part of which was erected in 1682, the mayor, Dr. Samuel Swift, who was a partner of the late Dr. J. Foster Jenkins, presided, and made the opening address.

REPORT ON PROGRESS IN THERAPEUTICS.¹

BY FRANCIS H. WILLIAMS, M. D.

THE ACTION OF SALINE CATHARTICS.²

THE most complete and exhaustive work which has thus far been attempted on this subject is undoubtedly that of Dr. Hay. The whole of his paper is not as yet published, but there is sufficient to indicate the excellent way in which the work has been done, and to warrant a brief outline of the portion which has been printed.

After indicating at some length what has been done by previous investigators the author divides his experiments into the following series:—

"Series A. The effect on purgation of the administration of the salt (sulphate of soda) by the mouth in a state of concentration and of dilution; and the elimination of the salt by the kidneys and the alimentary canal.

"Series B. The effect of the salt on the intestine when injected directly into the viscus, after the method of Colin and Moreau, with analyses of the fluid as to the salt it contained, and to its digestive and other properties.

"Series C. The effect of the saline purgative on concentration of the blood.

"Series D. The effect of the salt on the alimentary canal and its absorption from the canal, as ascertained by killing the animals at stated intervals after the administration of the salt by the mouth, and measuring the fluid in the canal, and estimating the quantity of salt present.

"Series E. Its purgative effect when injected into the blood.

"Series F. Its purgative effect when injected subcutaneously.

"Series G. Its effect on the secretion of the urine."

Under Series A is an account of the various experiments done on rabbits, cats, and dogs. It is shown that in an animal fed without water a given dose of sulphate of soda in a concentrated, twenty per cent. solution, will not cause purgation when the same dose in two and one half per cent. solution will do so, and the more dilute the solution the more quickly is the action produced. Experiments done on rabbits, cats, and dogs show that if given in a concentrated form, and if for a single day only previous to the administration of the salt little or no water is taken with the food, sulphate of soda will not produce catharsis. "This seems to warrant the deduction that sulphate of soda acts neither by peristalsis nor by increasing the intestinal secretions, but merely by uniting with the water in which it is dissolved, and with the fluids which it meets in the alimentary canal, preventing the absorption and preserving the fluidity of the intestinal contents until the ordinary peristaltic movements have carried them to the rectum."

It may be urged that by a restriction of water in diet the water in the blood is diminished, and the blood being concentrated the usual amount of intestinal secretions are not poured out.

Vulpian has asserted that a purgative salt acts chiefly by exciting an inflammatory irritation of the alimentary mucous membrane, and consequently creates an exudation such as we observe in mucous catarrh.

¹ Concluded from page 392.² Journal of Anatomy and Physiology, vol. xvi.