THE TREATMENT OF MELANCHOLIA.

By LEWIS C. BRUCE, M.D., F.R.C.P. EDIN.,
PHYSICIAN SUPERINTENDENT TO THE PERTH DISTRICT ASYLUM,
MURTHLY, N.B.;

AND

H. DE MAINE ALEXANDER, M.D. EDIN.,
ASSISTANT PHYSICIAN TO THE PERTH DISTRICT ASYLUM.

In the *Journal of Mental Science* for October, 1900, we recorded the results of some observations on the various physical changes occurring during the acute and sub-acute stages of melancholia. In our previous paper we pointed out our belief that the majority of recent cases of melancholia pass through a definite course prior to recovering or becoming chronic; and we divided that course into an acute stage and a sub-acute stage, summing up the symptoms characterising the two stages as follows. A. *Acute stage*.—1. Mental symptoms: great depression, restlessness, vivid

hallucinations, and sleeplessness. 2. Pulse rapid, from 90 to 120 per minute, of high tension, and tending to be irregular: arterial pressure high (from 140 to 180 millimetres of mercury). 3. Temperature tending to be febrile (from 99° to 100° F.). 4. Urine scanty; excretion of urea deficient; trace of albumin present. 5. Tongue furred and foul; no desire for food or drink; digestive power of stomach upon coagulated albumin practically *nil*; motor power of stomach weak; bowels constipated and stools very offensive. 6. Skin dry. B. *Sub-acute stage*.—1. Mental symptoms less acute; the patient generally sleeps well; hallucinations, if present, do not affect conduct. 2. Pulse regular, softer, from 70 to 80 per minute; arterial pressure from 120 to 130 millimetres of mercury. 3. Temperature never above 98.4°. 4. Urine more abundant, excretion of urea considerably increased; albumin never detected. 5. Tongue clean; appetite for food and drink returning; digestive power of stomach-juice at first weak but later active; tendency to constipation less marked. 6. Skin becoming moist; sometimes perspiration profuse.

Before passing on to the subject of treatment we desire to record certain further observations made upon the urine excreted during attacks of melancholia.

During the acute stage of the disease we found that the

FIG. 1.

Chart illustrating Case 1.

FIG. 2.

Chart illustrating Case 2.

excretion of chlorides was normal, but when this acute stage was unduly protracted they were diminished. The ethereal sulphates were increased during this stage of the disease—an indication of intestinal putrefaction. In the sub-acute stage the chlorides were diminished but rose gradually to normal as the patient recovered. The diminished excretion of chlorides in the urine during melancholia is mentioned by Simon,¹ but without reference to any particular stage of the disease. The ethereal sulphates were not increased, showing that the antiseptic functions of the intestinal secretions had been resumed.

In the course of another year's work we have verified all these observations, and we believe that recent acute melancholia is a disease very amenable to treatment. Our first attempts at treatment were directed towards lowering the blood-pressure by means of erythrol tetranitrate, increasing the excretion of urea by the administration of ammonium carbonate (in 10-grain doses), in obtaining a healthy action of the skin by means of hot-air baths, and assisting digestion and assimilation by artificially digested food. We have discarded erythrol tetranitrate after an extended trial, as, although successful in some cases, it was very uncertain in action. The excretion of urea was certainly increased by the exhibition of ammonium carbonate, but we did not notice any benefit accrue to the patient as a result of its administration, and as this drug only differs from urea in having two

¹ Clinical Diagnosis, third edition, p. 297.

more molecules of water it is highly probable that the increased amount of urea obtained in the urine was really due to the oxidation of this alkaline salt in the body. Hot-air baths gave little relief and were rather troublesome as a routine practice. Artificially digested food soon became intolerably nauseous to patients who already had no desire for food. These early attempts at treatment were therefore not encouraging, and more particularly so as they failed to induce a sufficiently increased flow of urine to carry off the accumulating waste products of tissue metabolism.

In our previous paper we recorded the fact that if a

the fluids of the body are in some unexplainable way broken up, an insufficient amount of fluid is left for carrying away the products of tissue waste, and these accumulate in the body. There is a deficiency of fluid in the tissues and the demand for it must be met by administrating to the patient a copious supply of liquid, and it is essential that part of this fluid should be nutritive and easily assimilated.

In the treatment of our last eight cases of acute melancholia we have discarded all our earlier attempts at treatment and have worked upon the lines above indicated. The patients upon admission were put to bed and placed upon an

FIG. 3.

Chart illustrating Case 3.

FIG. 4.

Chart illustrating Case 4.

patient, while passing through the acute and sub-acute stages of the disease, be placed upon a fixed measured dietary of solids and liquids the amount of fluid excreted by the patient in the acute stage is less by many ounces than that excreted during the sub-acute stage. What becomes of the surplus ounces of fluid in the acute stage of the disease? They are not excreted by the integumentary system because the skin is abnormally dry, they are not exhaled in the breath, and, as we have shown, they are not excreted by the kidneys, as the urine is scanty in amount. There is but one explanation and that is, that in the acute stage of the disease

exclusively fluid diet of three pints of milk and three pints of weak tea (sweetened with sugar) per diem and as much water as the patient cared to drink. The tea must be weak, as if strong it tends to raise the mean blood-pressure.² Persons suffering from acute melancholia are, as a rule, thirsty and take this fluid diet readily. No solid food was given until the patient asked for it and complained of hunger. The result of this treatment in these eight acute cases of the disease has been most satisfactory. In every case the

² Oliver : Blood and Blood-pressure, p. 186.

urine increased in amount, the skin acted freely, and the excretion of urea was augmented—in some of the cases to 800 grains per diem. The arterial tension fell rapidly and steadily to normal or subnormal and the habit of sleep returned. The only drug administered was citrate of potassium in from 20 to 40-grain doses thrice daily. This was gradually reduced and finally stopped altogether when the nitrogenous equilibrium was re-established.

Early treatment is imperative in this disease, and our experience has shown that those patients who had been ill for some considerable period before admission took longer to recover than those in whom the disease was of comparatively recent onset. Of our eight cases five were treated early and in none of these patients did the acute symptoms last more than a week, and in them the sub-acute stage was either absent or of only a few weeks' duration. The remaining three cases were of long standing, and in them the acute stage lasted from two to three weeks and the sub-acute stage was prolonged for many weeks.

Relapses.—We have had no serious relapse during the treatment of these eight cases, and any threatening of such was due to one or more of the following causes. 1. The obstinate constipation so frequently associated with melancholia if not regularly relieved is a certain cause of relapse. In treating this symptom in our cases we used salines in combination with strychnine and when necessary enemata. 2. Menstruation temporarily accentuated all the symptoms, mental and physical, of the disease. 3. Gastric irritation induced by putting the patient too early or too suddenly upon a solid dietary.

Summary.—We believe melancholia to be a disease of disordered metabolism and that treatment should be directed towards increasing the excretion of waste products of this metabolism through the channels of the urinary and integumentary systems, and we mechanically accomplish this end by administering to our patients an abundant fluid dietary. By means of this treatment the blood gets rid of its overcharge of waste products and the arterial tension falls. We assist digestion by giving milk frequently, and in small quantities, as it is the most easily assimilated food. We consider the forcing of solid food (or such food as custards) upon a patient suffering from acute melancholia just as injudicious treatment as would be the feeding of a patient suffering from typhoid fever exclusively on beef-steaks. We append four charts illustrative of our cases, with a short summary of each case. Each chart shows the temperature, pulse, arterial tension, and the amount of sleep obtained from day to day. The amount of urea excreted on certain days during the 24 hours is also shown diagrammatically. A small additional table illustrates the fact that while the patients were on the fluid diet their loss of weight was practically immaterial.

Weight Table.

Cases.	Length of time on fluid diet.	Weight lost.	Weight gained.
1	7 days.	0	0
2	5 "	0	0
3	23 "	2 pounds.	—
4	28 "	3 "	—
5	8 "	0	0
6	38 "	1 pound.	—
7	33 "	5 pounds.	—
8	11 "	—	5 pounds.

CASE 1.—The patient was a female, aged 34 years. The chart is interesting because it shows the attack from the commencement. The temperature became febrile on Jan. 23rd, but the tension did not rise until the 28th, when the symptoms became very acute. Under fluid diet treatment and rest in bed all the symptoms had subsided by Feb. 1st. On the nights of Jan. 29th, 30th, and 31st sleep was obtained by the administration of two drachms of paraldehyde. She made a good recovery. Weight is rapidly lost during the onset of the disease and this patient lost nine pounds in seven days though she was on ordinary diet.

CASE 2.—The patient was a female, aged 64 years. The attack was treated early—within a week of onset. The acute symptoms lasted only three days. Sleep was obtained by

the administration of two drachms of paraldehyde on the nights of Oct. 31st and Nov. 1st and 2nd. There was practically no sub-acute stage. The patient recovered.

CASE 3.—The patient was a female, aged 42 years. She had been ill for one month prior to admission to hospital. The acute stage lasted for seven days. Sleep was obtained upon the nights of May 7th and 9th by the administration of two drachms of paraldehyde. The sub-acute stage was complicated by a threatened relapse and was prolonged, but the patient has now completely recovered.

CASE 4.—The patient was a man, aged 34 years. He had been ill for two months prior to admission. The acute stage lasted for 15 days. The onset of the sub-acute stage was gradual and the patient, though much improved, is not yet recovered at the present date (June 20th, 1901). In the acute stage sleep was obtained upon the nights of Feb. 22nd, 25th, and 28th by the administration of two drachms of paraldehyde.

Murthly, N.B.

THREE CASES OF PRURITUS ASSOCIATED WITH LYMPHADENOMA.

By WYNDHAM COTTLE, M.D. OXON.,
PHYSICIAN TO THE SKIN DEPARTMENT, ST. GEORGE'S HOSPITAL, AND
CONSULTING SURGEON TO THE HOSPITAL FOR DISEASES OF
THE SKIN, BLACKFRIARS;

AND

LEE DICKINSON, M.D. CANTAB.,
ASSISTANT PHYSICIAN TO ST. GEORGE'S HOSPITAL.

CASE 1.—A woman, aged 42 years, was admitted into St. George's Hospital on Feb. 20th, 1901, under the care of Dr. F. G. Penrose who kindly permits this publication of the case. The patient was suffering from well-marked lymphadenoma. Her illness dated from the autumn of 1899, when she lost strength and noticed lumps in the neck. She took to bed in November, 1900. On admission she was depressed mentally and physically and was markedly anæmic. The legs were œdematous; in the neck, the axillæ, and the groins were masses of enlarged glands, and over the anterior mediastinum was found extensive dulness, probably due to a glandular tumour. The patient sweated much and the temperature inclined to be hectic. The blood was examined on several occasions and showed only simple anæmiæ with moderate leucocytosis. The red corpuscles were generally about 3,000,000 per cubic millimetre; the white varied from 8000 to 14,000—the lymphocytes being in the fairly normal proportion of 18 per cent. Intense irritation of the skin was complained of at times, affecting the whole body, but more especially the neck, the shoulders, the back, and the outer sides of the limbs; and when the patient was uncovered she made violent efforts to scratch. Scratch marks were conspicuous all over the body, and there was brownish discolouration of the skin, especially below the eyes, at the bends of the elbows, in the axillæ, and on the inner sides of the thighs. On March 13th Dr. Cottle was consulted about an eruption of pemphigus which had appeared on the legs, accompanied by increased irritation of the skin. The eruption improved rapidly under an ointment of tar and in a month practically disappeared, though itching continued. The general condition, however, steadily deteriorated, and on May 3rd the patient was removed by her friends to a Home for the Dying. It should be mentioned that before the pemphigus appeared arsenic had been given in the form both of Fowler's solution and of cacodylate of soda. Whether or no the arsenic had any causal relationship to the pemphigus, it was certainly not responsible for the pruritus and pigmentation, both of which were of older standing.

CASE 2.—A female patient, aged about 20 years, was sent to Dr. Cottle by Dr. G. M. Pittock of Margate on Nov. 11th, 1896. The history given was that in June, 1896, being already somewhat ailing with enlarged glands and anæmia, she underwent some worry in her work and was vaccinated upon her appointment to a clerkship in the Post Office. Soon afterwards she came out in an eruption of papules which was suspected of being secondary syphilis from the vaccination. When seen by Dr. Cottle she was thin and very anæmic, with masses of enlarged glands at the root