

CASE IX.—G. H., male, æt. twenty-three. First spell three years ago; has averaged one a month since. During a period of nine months has had no spells, and describes himself as "enjoying the best of health."

CASE X.—E. Y., male, æt. fifteen. Had one severe spell a month and about twelve "light ones" every day; at end of two months he was averaging one mild spell a day. Had gained flesh and mental condition was improved.

CASE XIII.—Female, æt. three. Number of spells reduced from three a week to two in a year.

CASE XIV.—Female, æt. two-and-a-half. Three to four spells a week; no relief was afforded during first three weeks of treatment, at the end of which time improvement commenced, and when last heard from she had had no spells for six months.

The advantages claimed for this combination are, First, that it exercises a most powerful influence in decreasing the number of epileptic paroxysms. In the majority of the cases treated the average number of seizures had either been stationary for some time or was increasing, and they had previously been treated with other drugs. Second, that when a seizure does occur it is of much lessened severity. Third, while lessening the number and severity of the seizures, it does not do this at the expense of the remaining physical and mental health of the patient. The doses used were of antipyrin, eight grains, ammonium bromide, twenty grains; children in proportion.

TREATMENT OF EPILEPSY BY ANTIFEBRIN AND SULPHONAL.

Dr. HINSDALE made a report of the use of antifebrin in epilepsy at the Infirmary for Nervous Diseases. Better results were obtained in the lesser epilepsies in which bromides failed than in the greater epilepsies. One case was reported in which bromides made the condition worse, while antifebrin kept the attacks down to such a number as to make it possible to follow his vocation as a compositor. He took from ten to twenty grains three times a day for three years, and excepting an appearance of slight cyanosis there was no evident disadvantage in its use.

Nine other patients were temporarily benefited by antifebrin, but eventually were compelled to return to bromides.

Sulphonal was used in a large number of cases, seven of which were reported as having been under treatment a sufficient length of time to form an estimate of its value.

The dose employed was from three to six grains three times a day, and the period of treatment varied from one month to ten months.

In one case, Maggie E. R., aged twenty, epileptic attacks occurred weekly. Duration of seizure variable, from one minute to one hour. Convulsions general. *Petit mal* two or three times daily. Sulphonal in three or six grain doses thrice daily mitigated the severity of the attacks and reduced them in frequency, so that after three months and a half of treatment only one attack had occurred during a period of eight weeks. She is at present taking five grains of sulphonal three times a day.

Besides these a large number of other cases of epilepsy were treated with sulphonal. The results were variable; temporary improvement was usually noted, but in many instances the patients failed to continue its use for a sufficient length of time.

The dose for children is three or four grains, and for adults, six or eight grains, three times a day. Frequently patients are made sleepy by the use of sulphonal in these amounts. In that case two doses daily may be given.

The best results from sulphonal are in those cases where bromides cause so much skin trouble or mental disorder that their quantity must be lessened or altogether suspended; then sulphonal becomes valuable.

DISCUSSION.

Dr. FRANCIS X. DERCUM.—I have had the opportunity of observing both methods of treatment—that employed at the University of Pennsylvania and that used at the Infirmary for Nervous Diseases. The mixture of ammonium and antipyrin acts differently from either drug alone. Certainly antipyrin by itself will not decrease the number of attacks, and antifebrin will do it only occasionally. When antipyrin is added to the bromide it increases its efficacy. In this way a much smaller dose of bromide need be given and thus the liability to acne and bromide dementia is lessened. At a recent clinic, Dr. H. C. Wood mentioned a peculiarity which he thought that he had observed in those patients who took antipyrin and the bromide for a long time, and that is that there seemed to be a lessening of the heat-producing power. Such patients found that they had to dress more warmly than before, even quite heavily in comparatively warm weather.

When I spoke to Dr. Hinsdale of sulphonal as second to the bromides, I meant bromide mixtures in general. Sul-

phonal has, in my experience, a decided value in diminishing the number of epileptic attacks. I can recall, however, several cases in which the attacks of epilepsy recurred as soon as the dose of sulphonal was diminished short of an amount necessary to cause drowsiness. If in a given case four or five grains were sufficient to produce drowsiness, no attacks would occur as long as this dose was continued, but the moment the dose was lessened the attacks recurred; and in a few instances when the sulphonal was kept up in full dose, the attacks would occur after a time with great violence, although their onset had been delayed. However, in a number of instances I have succeeded in markedly diminishing both the violence and the frequency of the seizures by very moderate doses of the drug, and its chief value seems to be that it can be administered for quite long periods in place of the bromides thus enabling the patient to rally from the depressing effects of the latter. I have had four or five cases in which I alternated between sulphonal and the mixture of bromide of ammonia and antipyrine successfully for long periods. The prolonged administration of antipyrine apparently has no bad effect. But after it has been given for a time it is well to alternate with some drug that has less power.

Dr. D. D. STEWART.—Would not some other bromide answer as well in this combination as that of ammonium? The ammonium salt is the worst tasting of the bromides. I have used potassium bromide with antipyrin with advantage. I have found this combination singularly efficacious in a girl who was having frequent attacks. She had been under my care for about a year and I had tried almost everything without effect, until I put her on eight grains of antipyrin with twenty grains of potassium bromide. Under this treatment, she had in a period of two weeks, only one light seizure, although prior to this she had from three to eight attacks a day, notwithstanding she was taking large doses of potassium bromide.

I would ask if there is not some danger from giving sulphonal in doses of six or eight grains, three or more times a day, for any length of time? I believe that nephritis has been observed to follow the use of sulphonal.

Dr. J. MADISON TAYLOR.—I testify gladly to the value of antipyrine in combination with a bromide. I would like to know of any good reason why the bromide of ammonium is thought best to go with it, however; that of lithium has served me well in this connection. In a few instances this mixture has wrought most satisfactory results at my hands; not curative but largely palliative and promising even better.

Sulphonal has disappointed me. The cases Dr. Hinsdale relates are well known to me at Dr. Mitchell's clinic where we hoped much from this drug. In certain instances there antifebrin gave excellent results causing, however, a steady cyanosis at times which seemed menacing, but really working no hurt. There are yet combinations to be learned which promise better than any single drug.

Dr. JAMES HENDRIE LLOYD.—We hear a great deal about the poisonous effects of antipyrin. I would be glad to hear the opinion of those who have used antipyrin for a long time; does its use lower nutrition or tend to impair the vitality of the patient? I have myself used antipyrin to a considerable extent, but I have failed to convince myself that it has any serious effect in ordinary doses. Certainly its dangers are not so great as are popularly supposed. Have there been any studies made of the blood after the use of antipyrin? I saw recently a statement, which was not substantiated, that antipyrin has not only a depressent action upon the nervous system, but also a disturbing action upon the nutrition and composition of the blood.

Dr. JOSEPH LEIDY.—Some three years ago I reported a series of cases of epilepsy and other neuroses treated by the use of antipyrin and antifebrin. Several of these cases were under the care of Dr. Wood. It was found that antifebrin proved more efficacious than antipyrin. In one case under treatment for several months antipyrin was used in quite large doses, as much as sixty grains a day. It diminished the number and the intensity of the attacks, but as soon as the drug was withdrawn they recurred with great frequency. I think that thirty-one cases were reported, in four the attacks were considerably lessened by antipyrin, but in the others the drug had no effect. Upon the lesser epilepsies, antipyrin seemed to have considerable effect. In the majority of cases of *petit mal* the attacks were not only diminished, but were completely obliterated during the time that the drug was used. With antifebrin the results were better, in many of the slight epilepsies the attacks did not return after four or five months. I know of no case.

Dr. W. H. BOCHROCH.—At the nervous department of the Northern Dispensary four cases of epilepsy are under treatment with antipyrin in combination with bromide of ammonium, or bromide of potassium. In all there has been a diminution of the number of attacks, and in two there is reason to hope that the attacks will remain away for some time. Two cases have been under observation for four months, and they show no change in nutrition.

Dr. THOMAS J. MAYES.—I have had considerable experience with the administration of antipyrin, phenacetin, and antifebrin, and have given these agents for long periods. I think that there is a view abroad that these agents are depressent and really toxic. I think that this view is not borne out by anything that we know in the way of experimental research or clinical observation. Some have a horror of giving these agents in fever on account of the fear that they cause depression of the heart and collapse. Experiment on animals show that these agents do not have a depressing influence upon the heart. If there is any influence at all, it is to cause elevation of the blood pressure. I have given phenacetin and antifebrin for long periods. I have one patient who is under observation at the present time who has taken three or four grains, four times a day, for more than a year without any toxic effect that I can see, and the disease for which it was given, namely asthma, has entirely disappeared. I have given antifebrin in enormous doses to phthisical patients—as high as eighty grains a day for six or seven days. This is an agent which you cannot give in large doses for any long period. I used it to depress temperature, but at the end of this period I have suspended it on account of the cyanotic appearance which it calls forth. This is not a true cyanosis, but a discoloration partly due to the decomposition of the blood. Antipyrin can be continued for about three weeks, when it produces an uncomfortable, distressing rash.

Of the three agents mentioned, I think that phenacetin is the least likely to cause trouble, antifebrin has to be suspended on account of the discoloration, and antipyrin on account of the urticaria-like eruption, and even the ulceration of the skin which it produces when it is continued more than three weeks in seven-and-a-half grain doses repeated every four hours. My experience has not been such as to make me think that these agents are depressent, but of course, if given in excessive doses they will depress just as well as other agents.

Dr. FRANCIS X. DERCUM.—I have given antipyrin in ten grain doses four times a day for a very long period, but have never observed any rash, I should regard this as rather the exception than the rule.

Dr. CHARLES K. MILLS.—I have used antipyrin, antifebrin, sulphonal and most of the other remedies which have been recommended, but I have invariably been driven back for most cases to the combination to which I resorted many years ago, that is, of the bromides with Fowler's solution

and conium. This in the majority of cases gives the best results. Of course with all of these drugs you have to use nutrients and tonics.

Dr. JOSEPH LEIDY.—I should like to report the results of a *post-mortem* in a case of death after the use of large doses of antipyrin. The patient was a man of forty-five or fifty years, who for about five weeks had been given antipyrin for epilepsy. The number of attacks diminished considerably, there was marked cyanosis which was invariably found after the use of antipyrin, and was more marked with antipyrin than with antifebrin, but I do not remember the occurrence of a rash during or following the administration of these drugs. At the autopsy this case showed great congestion of the brain with œdema at the base. The internal organs also were congested. It was the opinion of those who had had this case under observation that death was due to this action of the drug, and in all probability to a direct action upon the hæmoglobin of the red-blood corpuscles. The blood of the epileptic cases was also examined, to determine the amount of hæmoglobin, and also the number of corpuscles. Antipyrin seemed not only to diminish the number of corpuscles, but also the percentage of hæmoglobin. The corpuscles were reduced to three or three-and-a-half millions in the cubic millimetre, and the hæmoglobin to seventy or eighty per cent.

Dr. C. S. POTTS.—Our reason for using the bromide of ammonium is that Dr. Wood believes that it has a more powerful influence than the other bromides, and from some comparative trials made, such seems to be the case. In none of the cases in which I have given the bromide of ammonium and antipyrin, have I seen any bad effects. Those cases that were reduced in health have improved.

I should like to read the report of a few cases treated in this way by Dr. Hay, at the State Asylum for the Insane at Morris Plains, N. J., and published in the "Medical Age," July 25, 1891.

Male, æt. forty-five. For eight months previous to the commencement of this treatment he had, on an average, thirteen convulsions a month, all extremely violent, and attended by pre-epileptic mania of short duration. During this time he was taking nitro-glycerine gr. $\frac{1}{100}$ four times daily. In October he was placed upon bromide of ammonium, gr. xx, with antipyrin, gr. vii, and at the end of one month the antipyrin was increased to gr. x in each dose. In all he took this combination three months with the following result: during the first month he had twelve seizures;

during the second, nine, and during the third month, only three fits. The character of the fits was modified favorably, and he was far less violent than usual.

Male, æt. thirty. In eighteen months previous he had an average of twelve convulsions a month, during which time he was given antifebrin, gr. viii three times a day. He was placed upon antipyrin and bromide of ammonium, and it was continued three months and a half, during which time he averaged eight fits a month.

Male, æt. thirty-eight. Convulsions date back fifteen years. He has unusually violent attacks, with acute mania preceding them for some hours. After a succession of fits he would fall into profound coma lasting generally four days, after this the man would be dazed and stuporous for a few days more, when he would become sane, and remain so until the next attack. He had received a prolonged course of the bromide of sodium and other drugs without any favorable result; during the three months the antipyrin and bromide of ammonium was administered the attacks were mild, unattended by mania, and only followed by a slight degree of coma.

Male, æt. forty-six years. Epileptic since ten years of age; six years ago began to be maniacal at his convulsive periods, which occur two or three times a month; had been treated chiefly with the bromides; during the previous six months he had had twelve convulsions; during the three months he was given the antipyrin and bromide of ammonia, he only had one convulsion, which was unattended with mania.

Male, æt. eighteen. For thirteen months prior to trying this mixture, during which time he was successively treated with the bromides, ergot, nitro-glycerine and antifebrin, he had an average of seventy-four convulsions a month. He was given antipyrin, gr. viii, and bromide of ammonia, gr. xx to i.d., and for *the first time* a reduction in the number of fits occurred, the average number per month for three months falling to sixty.

REPORT OF AUTOPSY ON A CASE OF THORACIC ANEURISM IN A PATIENT PRESENTED TO THE SOCIETY FOR DIAGNOSIS SOME MONTHS BEFORE DEATH.

By DR. THOMAS J. MAYS.

J. E., aged forty-eight. Park policeman; was sent to me for examination by Dr. Chas. K. Mills, October 28, 1890, and from him I obtained the following history: For about