REMARKS.—The first point of interest as to this case is its etiology. The very close union of two of the aortic valves appears to me strongly in favour of a congenital condition of imperfect development. Whether there was foetal endocarditis, I will not pretend to say; but it seems likely that the congenital imperfection predisposed to the subsequent endocarditis in this region.

Fig. 1.—Lateral View of Human Brain (Ecker). S₁. Posterior Limb of Fissure of Sylvius. S₂. Anterior Limb of Fissure of Sylvius. Rol. Fissure of Rolando. Asc. Fr. Ascending Frontal Convolution. Asc. Par. Ascending Parietal Convolution. F₁, F₂, F₃. Superior Middle and Inferior Frontal Convolution. The dotted portion represents the situation of the lesion on each side of the brain—viz., in the lower end of the ascending frontal and the hinder end of the middle and inferior frontal convolutions.

Fig. 2.—Lateral View of Brain of Monkey (adapted from Ferrier). Stimulation over areas (9) and (10) produced movements of mouth and tongue. These areas correspond with the lower portion of the ascending frontal and the hinder end of the inferior frontal in man.

The sequence of events seems clear, viz., that vegetations were carried either from these valves or from the left auricle to the spleen and kidneys, and also, first, to the branches of the left middle cerebral, and afterwards to the branches of the right middle cerebral. There, these vegetations first caused block, and subsequently set up changes in the walls of the vessels and in the parts of the brain supplied by them.

It seems fair to associate each attack of hemiplegia with diminished blood-supply, first to the left, afterwards to the right, side of the brain, in the convolutions round the fissure of Rolando. But, whilst the greater part of the regions referred to recovered, the nutrition of one small portion on each side was *permanently damaged*.

Is it unreasonable to associate this bilateral lesion with the only marked symptom which remained after the two attacks of hemiplegia had passed off, viz., the loss of voluntary power over the mouth and

tongue muscles? I own that, at first, the question of disease of the pons or medulla came into my mind; but the entire absence of wasting of the tongue, the absence of ocular palsy, the non-implication of the sensory division of the fifth nerve, and the very limited affection of the facial, were surely strong points against such a condition. Dr. Hughlings Jackson, who was kind enough to look at the boy, predicted disease of the regions supplied by branches of the two middle cerebrals.

The relation between the specialised symptoms during life and the well-defined lesions found *post mortem*, is substantiated by the results of physiological experiment. Professor Ferrier has shown, in the brains of monkeys, that in this identical region, or rather in the region homologous with it, the centre for the movements of the mouth and tongue is situated. Now, according to Dr. Broadbent's hypothesis, the bilateral muscles, which act together, are represented on the two sides of the brain. After the first attack of hemiplegia, although this region on the left side was probably permanently damaged, yet still the right side remained intact. But, after the second attack of hemiplegia, the corresponding region on the right side became damaged; and henceforth, as far as voluntary movements of the mouth and tongue were concerned, the boy was irretrievably deficient.

The case is incomplete, because of the absence of a microscopic examination of the pons Varolii. The brain was put into spirit, but did not harden properly. The lower part of the medulla and cervical region of the cord, however, were preserved; and I have to thank my friend Mr. R. W. Parker for some sections of them. In the spinal cord sections, there is undoubtedly some thickening of the neuroglia generally. It is most marked in the front of the posterior columns. What the significance of it is, I am not prepared to say. It is quite different from the descending sclerosis described by Charcot. In the medulla oblongata, Dr. Gowers (who has been good enough to look over the sections) has failed to find anything wrong, except that the cells of the nuclei of the vagi seem a little smaller than natural.

ON THE TREATMENT OF ACUTE RHEUMATISM.*

By E. MARKHAM SKERRITT,

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DR. LATHAM says: "Acute rheumatism has experienced strange things at the hands of medical men. No disease has been treated by such various and opposite methods. Venesection has wrought its cure, and so has opium, and so has calomel, and so has colchicum, and so have drastic purgatives. I speak of each of these remedies in the sense which medical men imply when they talk (as they often do) of this, that, or the other thing being their 'sheet-anchor'—meaning that they rest upon it alone for the cure of the rheumatism, and employ other remedies either not at all or for very subordinate purposes. And, indeed, I bear my testimony to the success of each of these different remedies so far as that, under the use of each, I have seen patients *get well*."

Had he written in these days, Dr. Latham would have had many other "strange things" to add to his list: alkalies, acids, salines, hot water, cold water, lemon-juice, citric acid, chloral, belladonna, iodide of potassium, ergot, digitalis, aconite, guaiacum, emetics, sulphur, antimony, perchloride of iron, quinine, iodine, plaster of Paris bandages, galvanism, subcutaneous injection of carbolic acid, blisters, podophyllum, cynara, propylamine, chloro-hydrate of trimethylamine, and last, but not least, salicin, salicylic acid, and salicylate of soda. All these remedies have been used for rheumatic fever, and each has been extolled as more potent than all the rest.

It is, I take it, the duty of the opener of the debate to facilitate discussion by briefly laying before you the results of past experience. I will, therefore, give a summary of the effects of the more important of the above remedies.

First, however, arises the question, What are the *natural* course and duration of acute rheumatism? We all know that rheumatic fever has no definite course, and is most uncertain in its duration; that some cases will be long protracted, others will be well in two or three days; hence our difficulty in deciding on the merits of the various methods of treatment. The results of the *mint-water* treatment by Drs. Gull and Sutton drew special attention to the fact that rapid recoveries were often made when the only treatment was good nursing, and that

* Read before the Bath and Bristol Branch: being the opening paper at a discussion on the Treatment of Acute Rheumatism.

we had departed from the good old times when the sole remedy for rheumatic fever was six weeks in blankets. In a series of twenty-five cases, all well marked first attacks, the average duration of acute symptoms under treatment was 9.1 days, or, from the beginning of the disease, seventeen days. Hence Drs. Gull and Sutton concluded that drugs had little influence in shortening the disease. With regard to heart-complications, the eleven patients whose hearts were healthy on admission remained free from cardiac complication. They, therefore, held that the heart was affected early in the disease (generally within the first week); and that, if it escaped for a week, it would probably escape damage altogether. This is a very important conclusion, and merits special attention when we are comparing the virtues of different remedies; for we see that, if it be correct, many drugs will have the credit of warding off heart-complications simply because the time for the occurrence of these lesions has passed before the medicine is given.

We have, doubtless, all of us met with cases of rheumatic fever which, by their rapid recovery, have forcibly suggested the reason why there are so many highly satisfactory remedies for the disease. I have lately had under my care at the Bristol General Hospital several marked instances, and will refer to two by way of illustration.

A young woman, in her second attack, had a temperature of 102.5 deg., a pulse of 116, and well marked joint-affection; she had been ill four days. The treatment was a mild purgative occasionally. In three days, the temperature went down to normal; in four days, the pulse dropped from 116 to 80; and, in five days, the pain was entirely gone. Here is the temperature chart of another patient:—On admission, the temperature was 104.6 deg.; in four days, it was normal.

I propose to discuss the treatment of acute rheumatism under the following heads.

- A. Treatment of the Constitutional Disease: the effect as regards—
 - a. The Ordinary Phenomena and the Duration of the Disease;
 - b. The Prevention of Relapse; c. The Occurrence of Complications, particularly of the Heart.
- B. Treatment of Complications, with Special Reference to Hyperpyrexia.

A. *Treatment of the Constitutional Disease.*—I will speak only of those remedies which, at the present time, have the best reputation: alkalies and salines, iron, quinine, quinine and alkalies, blisters, and, lastly, salicin and salicylic acid.

1. *Alkaline and Saline Treatment.*—When large doses of bicarbonate of potash are given, the urine becomes either neutral or alkaline, instead of highly acid; together with this change, there is often a marked alleviation of the acute symptoms: the pulse falls, the temperature is reduced, and the pain is said to be generally relieved within forty-eight hours. We must remember, however, that sometimes, in acute rheumatism, the urine will become alkaline without apparent cause, and that there is no necessary connection between alkalinity of the urine and abatement of the acute symptoms, though these are very frequently associated. Alkalies in large doses necessarily make the urine alkaline, but this alone is no proof of any action upon the disease itself. The duration of rheumatic fever is, according to statistics, shortened by alkalies: in fifty-one cases recorded by Dr. Garrod, the duration under treatment was six to seven days, as compared with 9.1 days under mint-water; and the total duration thirteen to fourteen days, instead of seventeen. The patient is, however, often left weak and anæmic to a marked degree. Next, as regards complications, any of the complications of rheumatic fever may occur while the patient is under the influence of alkalies. As to the heart, Dr. Dickinson gave statistics in which the percentage of heart-disease occurring under alkaline treatment was 2.1, as against 31.7 under various other remedies. Dr. Garrod says that the heart was never affected after the patient had been taking the remedy for forty-eight hours. On the other hand, Dr. Stewart, on comparing the results of two years' alkaline treatment with those of two years of expectant treatment, found that the percentage of heart-disease was nearly equal in the two periods. Dr. Wilks quotes two interesting cases in which, under alkalies, the urine speedily became alkaline, and the pain was very much relieved in two days; but, on the third day, acute pericarditis came on in each, showing that the articular disease may be cut short, but the heart may not be saved. We must not forget, too, the mint-water cases, in which no heart-complications occurred. It also seems that, when heart-complications do come on under alkalies, they are more troublesome; the effusion of pericarditis is often very large in amount, and there is a greater tendency to pericarditis. Thus alkalies shorten the disease, do not prevent complications, and debilitate the patient.

2. *Treatment by Perchloride of Iron.*—This has been strongly ad-

vocated by Dr. Russell Reynolds. In a series of sixty-five cases, the relief of pain was often marked and early, but only in half the cases was the pain gone by the tenth day. The pulse sometimes fell from 120 to 40 in two days. As to the duration of acute rheumatism under iron, the temperature was normal by the fifth day in 36 per cent., and before the tenth in 61 per cent. This does not compare favourably with Dr. Garrod's results with alkalies, where the average duration of the whole number of cases was six to seven days; nor is there much advantage over the mint-water treatment, for in the latter the average was 9.1 days. In Dr. Reynolds's cases, heart-disease was present in 48.1 per cent.; but no distinction is made between those cases in which it existed before and those in which it came on under treatment. In twenty-three cases treated with iron in University College Hospital in 1875, heart-complications came on under treatment in 30.4 per cent.; this is a large proportion when compared with Dr. Dickinson's alkaline cases, where the percentage was only 2.1; but here, again, we are reminded of the uncertainty of acute rheumatism; for, on examining the cases treated with alkalies in the same hospital for the same year, I find that the percentage of heart-complications is 37.5, thus exceeding the proportion under iron.

3. *Quinine* has been extensively used in France; very large doses have been given—from fifteen to ninety grains in the twenty-four hours. Its influence on the disease is said to be very marked; the pulse and temperature rapidly fall, the joints are quickly relieved, and the heart is seldom implicated.

4. *The Quino-alkaline Treatment* is strongly recommended by Dr. Garrod, who has found it much more efficacious than the simple alkaline treatment; he says there is less tendency to relapse, and that the fever leaves the patient in a much more satisfactory condition.

5. *Blistering* (revived by Dr. Herbert Davies).—Blisters are very freely applied near the affected joints, and the resulting discharge is supposed to afford a vent for the rheumatic virus. The advantages claimed are, that the joints are rapidly relieved, the pulse becomes slower, and the heart is safer. On the other hand, in the experience of others, the only result has been to hasten the disappearance of inflammation from the joints without otherwise affecting the course of the disease.

6. *Salicin, Salicylic Acid, and Salicylate of Soda.*—I propose here to consider what claim these drugs have to be regarded as specifics in acute rheumatism.

Doubtless, we were all struck by the observations on salicin published by Dr. MacLagan, and we could not but admire that poetic faith in the goodness of Nature which led him to salicin, in the belief that, as the cinchona flourished where ague abounded, so, where Nature had decreed that rheumatic fever should prevail, there she had also placed a remedy. But will a wider experience bear out the conclusion that salicin is a specific in this disease?

I have collected a series of forty-three cases treated with salicin, including my own, and will lay before you some of the data obtained from them. Excluding all cases in which the dose was less than twelve grains every three hours, the following are the results.

On the temperature.—No effect in 19.4 per cent.; in the others, normal in 4.9 days, or in three days in 33.3 per cent.

On the pain.—No effect in about 23 per cent.; omitting these, pain gone in 3.8 days, or in three days in 50 per cent.

Dr. MacLagan has since said that the dose he first recommended is too small, and that this accounts for so-called failures of salicin. On dividing the cases into two groups, and placing in one all in which the dose was from ten to fifteen grains every three hours, and, in the other group, putting all cases where the dose varied from twenty grains every two hours to thirty grains every hour, I got the following results.

Failure with the smaller doses in 16.6 per cent.; with the larger, in 30.7 per cent.

A normal temperature with the smaller doses in 4½ days; with the larger, in 6½ days.

Complications.—With the smaller doses, two cases of endocarditis and one of pericarditis; with the larger, three cases of endocarditis and two of pericarditis. With the smaller, one case of pneumonia; with the larger, one case of pleurisy. In each series, one case of hyperpyrexia.

Altogether, therefore, the larger doses have been followed by the worse results. If the doses first given were too small to be effective, what becomes of those brilliant early results which introduced salicin, and which have not since been surpassed?

To turn to salicylic acid and salicylate of soda:—From a series of twenty-seven cases, we get the following data:—failure in 20 per cent.; excluding these, temperature normal in 4.1 days, or in three days in 50 per cent.; pain gone in 3.2 days, or in two days in 56.6 per cent.

If now we compare salicylic acid with salicin, we find :—failure of salicin in 19.4 per cent.; of salicylic acid in 20 per cent.; temperature normal under salicin in 4.9 days, or in three days in 33.3 per cent.; under salicylic acid in 4.1 days, or in three days in 50 per cent; pain removed under salicin in 3.8 days; under salicylic acid, in 3.2 days.

Though these results are somewhat in favour of the acid, yet they will not warrant us in deciding that one of these remedies is more powerful than the other.

A study of these results must, I think, make us allow that, under these remedies, the average duration of rheumatic fever has been remarkably short. Instead of the 9.1 days of the mint-water treatment, we have 4.9 days under salicin and 4.1 under the acid. There is an advantage of from one to three days over the results of the alkaline treatment recorded by Dr. Garrod. Comparing with iron, in Dr. Reynolds's cases the temperature was normal in half the cases in ten days; under salicylic acid, normal in half the cases in three days. We must, however, still bear in mind the peculiar uncertainty of the disease with which we have to do.

[To be continued.]

THERAPEUTIC MEMORANDA.

NITRATE OF SILVER IN LARYNGEAL PHTHISIS.

IN the JOURNAL for July 21st, Dr. Llewelyn Thomas, commenting upon Dr. Marcet's paper on Affections of the Epiglottis, observes :—"I do not agree with the application of nitrate of silver in laryngeal phthisis, whether in solution or solid, as it produces great pain and frequently terrible spasm." Nitrate of silver, in my hands, has proved a valuable remedy in this disease. In a clinical lecture on phthisical laryngitis, which I published two years ago, I wrote :—"When the mucous membrane (of the larynx) is swollen or ulcerated, we ought regularly to brush it twice or thrice a week with a solution of nitrate of silver of the strength of one drachm of the salt to a fluid-ounce of water. In this remedy, so used, I have had abundant ground for confidence; and I have found this kind of local treatment especially reliable in relieving or removing the difficulty of deglutition, which is often such a prominent and painful symptom in laryngeal phthisis." I suppose the nitrate of silver acts beneficially in these cases mainly by deadening the morbid sensibility of the tumid and ulcerated mucous membrane; and it thus, by diminishing the tenderness of the parts, renders swallowing less painful, and also, by lessening the sense of laryngeal irritation, abates the tendency to coughing. In many cases, in order to produce these good results, it is sufficient to apply the remedy only to the swollen epiglottis and arytaeno-epiglottidean folds without carrying the brush within the rima glottidis. In simple chronic laryngitis, the application of a solution of nitrate of silver to the mucous membrane of the larynx is often of service, but it causes considerable pain, and sometimes rather alarming spasm. Laryngeal phthisis is a malady so painful and so fatal, and so little controllable by treatment, that we cannot afford to dispense with the use of any method of medication which can in any degree relieve its symptoms or retard its progress.

JAMES SAWYER, M.D.Lond., etc.,
Physician to the Queen's Hospital, Birmingham.

THE EMPLOYMENT OF LIQUOR AMMONIÆ ACETATIS IN DYSMENORRŒA.

I HAVE great pleasure in adding my testimony to that of Dr. Drew in favour of the use of liquor ammoniæ acetatis in painful menstruation, noted in his paragraph in the JOURNAL of July 14th; but I fear the cases in which it seems to act as a specific are rare. When it has succeeded in my hands, there has generally been a physical condition, and that alone, to account for the pain; while, unfortunately, we know that by far the most frequent cause is purely anatomical and mechanical, and that then nothing short of an operation can afford relief. At times I have employed chloroform by inhalation, or have given it internally in the form of chloric ether, and have found it quite as serviceable as the liquor ammoniæ acetatis; but all means proved more or less unsatisfactory, and I consequently resorted to the old-fashioned treatment of the warm bath, and continue to prescribe this in preference to anything else, finding it the most effectual of all remedies in affording relief from the extreme pain sometimes present, while it is occasionally not less effectual in directly causing the discharge to appear. It is, in fact, both palliative and remedial in its effects; while many of the cases that have been cured by guaiacum, belladonna, colchicum, liquor ammoniæ acetatis, and the host of other

remedies used in the treatment of dysmenorrhœa, which was formerly very empirical, can only be palliative. If dysmenorrhœa were an entity, or a disease in itself, we might have a hope of selecting a therapeutic specific; but experience has taught us otherwise, and the cases in which the liquor ammoniæ acetatis will prove useful in any of our hands, I fear, can only be when the pain and obstruction are the result of inflammation and attendant turgescence of the cervical mucous membrane of the uterus.

ROBERT TORRANCE, L.R.C.S.E., Matfen.

CARBOLIC ACID FOR TINEA TONSURANS.

CARBOLIC acid has been a well-known remedy for tinea tonsurans for three years at least. The preparation I have always used, and I have never had a failure with it, is the glycerinum acidi carbolici, applied twice a day. I think that, if Dr. Lee will try the above, he will abandon the precipitated sulphur, the use of which I cannot see.

JOHN MILSON RHODES, Didsbury, near Manchester.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN.

GUY'S HOSPITAL.

DEMONSTRATION BY DR. SAYRE OF HIS MODE OF TREATMENT OF DISEASE OF THE SPINE.

AT the invitation of Mr. Durham, last Wednesday, Dr. Sayre gave another demonstration of his mode of treatment of disease of the spine at Guy's Hospital, many members of the staff and visitors being present. In the area of the theatre was placed a tripod stand, with a block-and-fall arrangement hanging from its centre, carrying a horizontal crossbar. A pale and delicate-looking little girl was carried in by her mother, being quite unable to walk. The case was one of extensive disease of the cervical vertebrae of several years' standing; many plans of treatment and many kinds of apparatus had been used without success. The curve on the back was very prominent, and an outline was taken by means of a strip of lead, and transferred to paper, for comparison at a future date. A finely knitted "skin-fitting" vest without armlets was slipped over the body, and adapted itself perfectly, without crease or wrinkle;* a pad was then placed on the abdomen underneath the vest. The mother held the child in her arms while a padded leather collar, made to fit the child, was buckled round, so as to support the head at the chin and occiput; straps from this collar were carried to the crossbar, and pads with straps attached were then passed under the arms and likewise attached to the crossbar. The child was then suspended by the pulleys, and the straps adjusted, thus regulating the pull upon the head and trunk respectively, till the child, when almost drawn off the ground, said she was "comfortable".

Bandages of loosely woven muslin, three yards long and two inches and a half wide, had been prepared by rubbing dry plaster of Paris into them; these, when thoroughly wetted, were passed round the body from below upwards, figure-of-8 turns being taken over "the hump", the layers being carefully rubbed down one upon the other. A case was thus built up around the trunk up to the arms while the child was suspended. The "head-piece" was then added; this consisted of a soft piece of iron bent like an inverted $\cap$, the limbs passing each side of the hump, and being bent so as to adjust themselves to the back; while lateral rib-like strips of perforated tin passed from this iron round the body and gave it further support; other turns of bandage then fixed this apparatus firmly in its position. The child was now taken down and laid on a water-bed; the stomach-pad was withdrawn, thus leaving room under the case for the respiratory movements; the case was slightly moulded over the crista ili, and the whole left to dry. When the case was set, the head was suspended by the collar from a bar arising from the top of the inverted $\cap$. The child said she was comfortable, and was able to walk a little with assistance.

By this method, the diseased surfaces of the vertebrae are gently separated from one another, and the trunk is fixed in position, with per-

* These vests can be obtained at 273, Oxford Street.