the arachnoid cavity in fourteen; and in all these, with the exception of one, consciousness was *completely* abolished. Again, of the fourteen cases, there was no paralysis in nine, and of these the hæmorrhage was *entirely* confined to the arachnoid in four; in five, there existed partial paralysis, but there was lesion in other parts, besides the arachnoid, in all except one.

In most of the cases the coma continued until death—an event which very rapidly supervened. Occasionally, however, the patients lapsed from a state of complete coma into that of partial unconsciousness. In others, again, consciousness was completely re-established; but in these cases the memory was feeble, and some became quite childish in their manner, even shedding tears on being talked to. Most of these cases marked by improvement, were seized by other attacks, of which they died.

As to the relation of loss of consciousness to paralysis, I find that, of the twenty-six cases of *complete* unconsciousness, there coexisted complete paralysis in eight, partial paralysis in eight, and no paralysis in nine; of the twelve cases of partial loss of consciousness, there coexisted complete paralysis in two, partial paralysis in nine, and no paralysis in one. Affection of the speech has been said to be dependent upon lesion in the anterior lobes. This symptom was noted in three only of the cases under discussion, and in none of them were the anterior lobes implicated. In one case, the arachnoid was the seat of the clot; in another, the middle lobe; and in the third, the corpus striatum.

There does not seem to be a very decided connection between the condition of the pupils and the alterations of intelligence. Of the twenty-nine cases in which the state of the pupils was noted, both were contracted in nine, and dilated in five; and one pupil was dilated in six cases, and one contracted in one. In four cases the pupils were inactive, and in four they were natural. In those cases of altered intelligence in which the pupils were contracted, paralysis existed in 88.8 per cent.; and in those in which the pupils were dilated, paralysis coexisted in 55 per cent.

From the foregoing, I think we may infer that in those cases of deep unconsciousness associated with partial, or with no paralysis, and contraction of both pupils, the clot is most probably in contact with the membranes.

[To be continued.]

Original Communications.

RHEUMATIC FEVER: ITS DANGERS AND ITS TREATMENT.

By JOHN ROBERTON, Esq., Manchester.

[Read before the Manchester Medical Society, February 3rd, 1864.]

I HAVE now for many years taken a deep interest in the treatment of acute rheumatism; and I incline to think (though in this I may be mistaken) that in Manchester we manage the disease more successfully than is done elsewhere. The importance of the subject cannot be questioned, especially when it is considered how large a proportion of all who have had rheumatic fever is found to suffer from some form of heart-affection. Facts in proof of this have long been well known; but none that I have met with are so startling as those lately given to the public in a very able work by Dr. Fleming of Glasgow, entitled *Medical Statistics of Life Assurance*. In the first place, Dr. Fleming states that, of fifty-seven deaths from disease of heart which occurred in members of the

Scottish Amicable Life Assurance during a period of thirty-five years, as many as one in four had suffered from rheumatism in some form before acceptance. He next gives the results in no fewer than 894 cases of this disease, taken from the works of various authors, which, in Dr. Fleming's opinion, warrant the inference that the heart is affected in *at least one-half* of the cases of acute and subacute rheumatism; and, lastly, he supplies data illustrative of a most important feature in this disease—its frequent occurrence, and its ill consequences, in early life. Thus, from a table of 379 cases of acute rheumatism at different ages, compiled from the work of Dr. Fuller, we learn that 196 were under the age of twenty-five; and that of these, 110, or a fraction over 56 per cent., had heart-complication.

Dr. Fleming dismisses this portion of his subject in the following words. "Rheumatic fever may take place at a very early age, as early as the fourth or fifth year, and lay the seeds of irremediable disease of the heart. I have known two such cases where the circumstance was forgotten, and only recalled to mind by the parents, many years afterwards, when serious disease had become evident."

Such being the danger from acute rheumatism, what, we may now inquire, is the treatment best fitted to arrest the disease and so, prevent heart-affection? I will state in few words, the remedies I have been in the habit of using for more than thirty years in rheumatic fever; and perhaps the readiest way of doing this will be to give the two following cases. The first is that of a vigorous adult male. After fatigue and unusual exposure to the weather, my patient became feverish, and complained of headache, with acute pain in the right knee. By the evening of the same day, the pain had extended to the ankle, as well as to the other knee; and the following morning the joints of the lower extremities were generally affected, with the addition of pain in the loins and one shoulder. In a few hours, nearly all the joints were the seat of acute inflammation. The nature of the case being obvious, a pill, consisting of a grain of opium and two and a half grains of calomel, was administered every three hours till six grains of opium and fifteen of calomel had been taken. The effects were some relief of the pains and a moist skin. I then ordered a purgative mixture, composed of an ounce and a half of Epsom salts and two drachms of the wine of colchicum, in eight ounces of cinnamon water; the dose, a wine-glassful, was repeated every four hours until there was free, not profuse purging. This being accomplished, I prescribed Peruvian bark with quinine, compounded thus: one ounce of powdered cinchona bark, with twenty-four grains of the sulphate of quinine, were shaken up in eight ounces of water, with the addition of a little dilute sulphuric acid to secure the solution of the quinine. Of this a tablespoonful was given every third hour, and also during the night, when the patient was awake. Lemon-juice in water was taken freely as a beverage; and dry cotton-wool, made warm, was wrapped round the joints that were most painful. This course, being steadily maintained—I refer especially to the use of the cinchona and quinine—allayed in a few days the articular inflammation, and speedily effected a cure. Indeed, where this treatment is pursued, I rarely have a patient who is obliged to remain within doors longer than three weeks. Of course, the remedies mentioned have to be varied as to doses, etc., according to the age of the patient and other circumstances. For instance, when the muscles are the chief seat of the disease—a most painful variety of rheumatism—opium may have to be given nightly throughout the illness.

The other case was that of a tall vigorous girl,

twelve years old. When I first saw her, she was in bed, suffering from what appeared to be a sharp feverish cold. The following morning, there was pain in the joints of one limb; and, by the evening, painful swelling in the joints of both the upper and lower extremities, such as left no doubt as to the nature of the complaint. Indeed, late in the evening of this second day, the joints of the fingers and toes were all affected. I immediately ordered for her eight pills—one to be taken every three hours—each containing a grain and a half of calomel, with a quarter of a grain of opium. In about twenty-four hours from this, an aperient mixture was prescribed, consisting of Epsom salts half an ounce, wine of colchicum a drachm, an ounce and a half of the compound tincture of senna, with cinnamon water to six ounces; of which an ounce was given every fourth hour to cause free purging. When this had been accomplished, and the fever and pain much reduced, the following was ordered.

Quinine, xxiv grains; dilute sulphuric acid, xx minims; red cinchona bark (in powder) 3vj; and water to 3vj.

Of this, well shaken up, was given, *perseveringly*, a teaspoonful every three hours by day, and also in the night, when she was awake. Before the end of the eighth day, the pain had left; and in a fortnight she might be said to be quite well. This case occurred about two years ago, and the health has ever since been sound and vigorous. Last autumn, I treated a strong girl of eleven, living in the country, in the same manner as the above; and she had to keep her bed only for nine or ten days, and has since been in excellent health.

It is assumed, when I am speaking of the treatment of acute rheumatism, that the patient is seen by me *at the commencement*. When a case has been going on without treatment, it may be, for two or three weeks, the remedies I have mentioned might not be altogether applicable.

Certain important particulars, with reference to the general management of this disease, I give in the following order.

1. Be the patient ever so robust, and the fever and pain severe, I never bleed, either by the lancet or with leeches.

2. I avoid diaphoretics; that is, doses of the Dover's powder to cause and keep up profuse sweating; which was, I may say, the universal practice in my early days.

3. I forbid the use of fomentations to the inflamed joints; indeed, I forbid every kind of application to the joints, excepting *dry warm cotton*, or a dry warm silk handkerchief. The use of friction with some anodyne liniment (apt to be had recourse to by the friends of the patient, unless guarded against) I also prohibit.

4. In patients under the age of twenty, I do not allow even the hands or face to be sponged or washed during the fever; indeed, I dread every kind of liquid application. I well remember, early in my residence here, a fine young man, about the age of sixteen, brought home from a boarding-school with acute rheumatism, his knees enveloped in wetted bandages. The consequence was death in three days, from cardiac inflammation.

5. The quinine and bark should not be given until the feverish symptoms have been allayed by the use of calomel and opium, followed by a purgative.

I will just add that, when the patient has been seen early, and treated as here recommended, I have never, during the last thirty years, known heart-affection to follow in a single instance.

I may state, in conclusion, that I am quite aware there are several eminent authors who recommend,

in rheumatic fever, other remedies and modes of treatment than what I have mentioned; but I have thought it best, for the sake of brevity, to give an outline merely of my own views and experience.

ON DIPHTHERIA.

By J. WEST WALKER, M.B.Lond., Spilsby, Lincolnshire.

[Concluded from p. 586.]

General Treatment. Chlorate of Potash. This medicine must be a special favourite in the treatment of diphtheritic diseases; for, no matter what else be recommended, it invariably receives favourable mention. The many points of resemblance between the diphtheritic false membrane and the white patches of thrush and its allied diseases, naturally suggest the idea of their being analogous morbid products; and any remedy known to possess a marked influence over the one was likely to be introduced as applicable in the treatment of the other. The result is that, whenever the diphtheritic sign presents itself, it has become a matter of custom to resort to chlorate of potash. The action of this medicine is involved in obscurity. "It does not appear to undergo any chemical change in its passage through the system; a fact fatal to the hypothesis of the chemico-physiologists, who fancied that it gave oxygen to the system, and was, therefore, well adapted to patients affected with scorbutic conditions, which were supposed to depend on a deficiency of that principle." (Pereira.) Yet, notwithstanding all this, like many other articles of our *materia medica*, its use is pretty well recognised and its employment understood, though its *modus operandi* may not admit of ready explanation. It is generally considered to be one of the so-called salines; to possess cooling, diuretic, febrifuge powers; and to have a similar action to the nitrate, though, according to my experience, in accomplishing its effects it is vastly inferior to the last named salt. In the treatment of foul ulcerated conditions of the parts within the cavity of the mouth, ample experience confirms its value; and, under such circumstances, its beneficial action may be relied on.

Nitrate of Potash is an older and better established fever medicine, while its use in cases of inflamed states of the mucous membrane of the faucial region has long been acknowledged.

Speaking summarily, then, chlorate of potash is the special remedy in diphtheritic affections of the mouth, and is of secondary importance in feverish states of the general system. Nitrate of potash is more applicable to affections of the throat in sthenic cases, and is one of the best febrifuges we possess.

Guaiacum. At the close of Dr. Watson's lecture on Cynanche Tonsillaris, he says: "I ought perhaps to add, that recently Mr. J. Bell of Barhead has very strongly recommended the internal administration of powdered guaiacum in large doses, as being almost a specific in the case of cynanche tonsillaris. He gives as much as half a drachm, suspended by means of mucilage in a draught, every six hours. Mr. Bell has no doubt that the remedy, if timely administered, will cut the disease short in ninety-nine cases out of a hundred. It has been found successful in other hands also." I have not had an opportunity of consulting Mr. Bell's contribution; but have had ample means for testing the efficacy of his remedy. It has long been my custom to prescribe it with confidence and satisfaction in the treatment of cases of ordinary sore-throat; and I have no hesitation in recording my belief that, under such circumstances, it possesses a very decided influence for good. I was, conse-