REMARKS

ON THE

BLISTER-TREATMENT OF RHEUMATISM.

By THOMAS B. PEACOCK, M.D., F.R.C.P.,
Senior Physician to St. Thomas's Hospital, etc.

FORMERLY, most diseases were supposed to be due to the operation of specific poisons, and their relief was sought to be obtained by the administration of antidotes or specific remedies which should either destroy the virus or prevent its action. With the progress of medical knowledge, these views have gradually been restricted, till at the present time we suppose such causes only to give rise to the specific fevers; and, as these follow a definite course of accession, progress, and decline, we have come to regard them as incapable of being arrested by any medical interference, though their intensity may be lessened and a favourable issue obtained by judicious management. Of the numerous diseases which owe their origin to other causes, and especially such as are due to the operation of cold, or cold and damp combined, the course and progress are very uncertain; and it has generally been considered that medicine may claim a wider sphere of usefulness in reference to them, though probably few scientific medical men at the present day claim for their art the power of curing disease, if by that term be understood the power of at once arresting the diseased action, or of "stamping it out," as the process of cure has recently been defined to be. Of late years, also, the tendency of medical opinion has been in these cases to regard the process of diseased action as one which must go through a certain course, and as, therefore, less amenable to remedial agency than was formerly supposed. Notably, in reference to pneumonia and rheumatism, these views have gained ground, though formerly such diseases were regarded as the types of affections which afforded the greatest scope for the employment of treatment which should have for its aim the entire and immediate arrest of the morbid action. That these views should have gained ground in reference to rheumatism, can readily be understood. The analogy between rheumatic fever and the specific fevers is certainly a close one. Like them, the disease has generally been supposed to be due to the existence of a poison in the blood, though to a poison generated in the system, not received from without. The close analogy which exists between gout, which clearly depends on the presence of such a cause, and rheumatism, is in favour of this view. The actual existence of any such *materies morbi* in rheumatism has not, however, been proved; and the sudden development of the disease after the operation of the exciting causes, in persons apparently hitherto in sound health, seems opposed to the idea that any such poison should have previously existed. Be this as it may, however, there seems no *a priori* reason why rheumatism should not have its duration shortened by treatment; and the possibility of this being accomplished, and the decision as to the greater or less efficacy of the different kinds of treatment which are employed with the hope of arresting or relieving the disease, would appear to be questions readily to be solved by experiment. An experimental investigation of this kind would, however, be attended with considerable difficulties, and would require for its satisfactory accomplishment the exercise of great care and special precautions.

1. Rheumatic fever is of very variable duration and intensity, and there is no certain means of ascertaining at the commencement of an attack what will be its character. The patient may at first present active symptoms, which may soon subside; or the disease may at the commencement assume a mild form, and subsequently become severe; or an attack, though never of any great intensity, may be very much prolonged.

2. The proportion of cardiac and other internal complications which obtains in any given set of cases, and which at first sight would appear to be a very fair test of the success of the different kinds of treatment adopted, is very variable, without reference to the circumstances in which the patient is placed while under care. Indeed, in a large proportion of cases, the evidences of complication are present to a greater or less degree before any treatment whatever is employed.

In support of these assertions, I may refer to the results of an analysis of the cases of rheumatic fever under my care at St. Thomas's Hospital. Thus I find that, of fifty cases in my wards between the spring of 1868 and the same period of 1872, the duration of treatment

before the establishment of convalescence was, on the average, 20.2 days, and ranged from 3 to 46 days in different cases; while the total duration of illness had an average of 28.3 days, and a range of from 11 to 56 days. The number of cases in which recent heart-complication occurred, either alone or in persons previously the subjects of cardiac disease, was 26.4 per cent., or 1 case in 3.7 persons treated. This average varied, however, very greatly when the cases admitted at different periods were compared. Thus, in 1868, of 20 cases, 5 had recent cardiac complication; in 1869, of 16 cases, 5 also were so complicated; in 1870, of 20 cases, 2 only had heart-affection; and, again, of 12 cases which were treated in the early part of 1871, 3 were complicated; or in the proportions of 25 per cent., 32.2 per cent., 10 per cent., and again 25 per cent., in the respective years. Yet these cases were treated precisely in the same way and under entirely similar circumstances; and, as equal variations obtained in the frequency of cardiac affections in the practice of the other physicians to the hospital, the differences could not be accidental, but must have been due to differences in the character of the disease, most probably depending on atmospheric conditions or epidemic influence. The intensity of the disease at different times does not afford any explanation of the relative proportions of cardiac complication which obtain, for the heart may be involved almost equally in the slighter as in the more severe cases. Indeed, the general rule is, that pericarditis occurs in cases that are of very slight intensity, while endocarditis is more common in the severe cases. The difference in the frequency of both forms of cardiac complication in the slighter and the severe cases of rheumatism is, however, not great. Thus, in the first series of cases to which I have referred, the proportion of recent cardiac complication in the more severe forms of rheumatic fever was 38.8 per cent., or 1 case in 2.57; while in the less severe the proportion was 34.7 per cent., or 1 case in 2.8. In the more recent report, the proportion of cardiac affection in the severe cases was 30 per cent., or 1 case in 3.3; and in the slighter cases, 27.02 per cent., or 1 case in 3.7. Of 14 cases of pericarditis contained in the last series of cases, in only one was the attack of rheumatism very severe. Of the 23 cases of cardiac complication, in 18 there were some signs or symptoms of the disease when the patients were admitted into the hospital; and in only 4 or perhaps 5 cases did the evidences of heart-affection first appear while the patients were under treatment.

It is evident, therefore, that, for any investigation into the usefulness of different forms of treatment of rheumatic fever to lead to satisfactory results, the fallacies which would depend on three causes must be guarded against.

1. It would be necessary that the patient should be kept in bed for a day or two after his admission, before the remedy to be tested should be tried, in order that any aggravation of his symptoms which might be due to his removal to the hospital should have subsided, and that the alleviative influence of rest, warmth, and suitable food, should have partly exhausted itself.

2. The cases must then be distributed into two or more classes, according to their probable severity as far as can be ascertained, and those which present any evidences of cardiac complication must also be separated from the general mass.

3. The different classes must be treated separately in a given way, the treatment adopted being precisely similar in all the cases of the same class.

In this way definite results would be obtained as to the effects of any given course of treatment; but if it were desired to test the relative efficacy of two or more remedies or plans of treatment, such remedies should be exhibited alternately or in some other regular order, to cases of a precisely similar character occurring at the same time; for otherwise, if the observations were made at different times, the duration of disease and the proportion of cardiac complication might be very different, altogether independently of the treatment adopted.

It is evident that an investigation of the kind referred to would be very difficult to carry out. It would be almost essential that it should be either instituted in the practice of one physician, or, if followed by several acting in unison, it would require to be reported upon by one observer. No one physician's practice, and scarcely any one hospital, would, however, afford a sufficiently large experience for the collection of an adequate number of cases in each class, so that, when subjected to analysis, the sources of accidental fallacy may be avoided. In the reports to which I have referred, I have tabulated and analysed as to duration the proportion of cardiac complication in all the cases of rheumatic fever which had been under my care for several years of which I had reports, the two series constituting a total of 233 carefully observed cases; and I had hoped that, having obtained in this way certain general results, I might be able to compare the facts thus elicited with others to be deduced from different sets of cases treated

in different ways. I have, however, become convinced that the results differ so largely, without reference to the treatment pursued, that no such comparison could yield trustworthy inferences. I make these remarks in order to explain why, in the few observations which I have to offer, in the employment of the blister-treatment in cases of rheumatism, I have refrained from giving the statistics of cases so treated and comparing them with those deduced from cases treated in other ways. This has been done by other physicians in reference to the use of different remedies. I think, however, that at present at least, we must abandon the hope of being able to reduce the treatment of rheumatism to anything of the nature of a demonstration, and be content to rest our opinions as to the efficacy of any system of treatment upon the impression which it produces on the mind of the careful and experienced practitioner.

I have now been in the regular use of the blister-treatment of rheumatism since 1865, when my attention was drawn to it by the paper of Dr. H. Davies. When I first employed it, it was only tentatively, one, two, or three blisters being applied at the same time or in succession, and in conjunction with other remedial means, and the general impression which I formed was not very favourable. Subsequently, I was induced to apply the blisters much more freely, three or four, or even six, at a time, and in rapid succession a still larger number, and I have been led to form a high opinion of their usefulness when thus used, and to confirm what has been said in favour of the treatment by Dr. Davies. The blisters are generally two or three inches wide, and sufficiently long to encircle the limb. They are placed above the chief joints that are affected, and are usually put on in the after part of the day; in the morning, or when they have risen sufficiently, the serum is let out and the surfaces are covered with warm linseed-meal poultices, and these are continued for several days. The treatment has been objected to as unnecessarily severe and attended with much suffering to the patient, but this is not correct. I scarcely remember an instance in which the patient, though specially questioned on the subject, has found fault with the treatment; and I have often heard them say that the pain caused by the blister is not to be compared with that of the rheumatism. Nor have I ever seen any serious inconvenience of any other kind caused by the blisters. Sometimes, however, there is a temporary increase of suffering when the blisters begin to draw, and the temperature rises and the patients are restless at night; but generally there is very marked amendment in the morning, both the swelling, tenderness, and pain being reduced, and the constitutional disturbance relieved. In some cases, however, the local symptoms may not be immediately benefited to any marked degree, and the blisters must be repeated, being applied above to the seat of the first vesication; or, after a few days' cessation, the same joint may be again affected, and in this case too the blistering must be repeated. The occurrence of second attacks in the joints first affected is not, however, by any means confined to cases treated by blisters, but equally occurs when constitutional means have been had recourse to.

Generally with the local means, constitutional remedies, especially the bicarbonate and nitrate or tartrate of potash are given more or less freely, according to the severity of the symptoms. The cases in which I have employed the blister-treatment are the following.

First, when several joints are coincidentally and severely affected, the sufferings of the patient are great, the constitutional disturbance severe, and the temperature high; in cases of this kind, three, four, or even six or more blisters are applied immediately the patient is seen, and as many more may be put on in the course of a few days in rapid succession as other joints are involved, or when those first blistered are not materially relieved or again become affected. From this treatment I have seen the most satisfactory results, both the local and general symptoms being greatly relieved by the free blistering, and the duration of the disease being curtailed. It is evident also that, if the active stage of the disease be shortened, as this is the period during which the internal complications are most apt to occur, the frequency of such complications will be lessened. It is in cases of this kind that the blister-treatment is most efficacious, the benefit obtained being apparently directly proportionate to the number of joints coincidentally affected, to the severity of the local symptoms, and to the freedom with which the blisters are applied to the whole of the parts involved, so that an immediate and decided impression is produced upon the disease. In cases where only two or three joints are affected, though these may be all blistered, the relief obtained to the constitutional disturbance is less decided, and where the pains are rather diffused over all parts of the body than limited to certain joints, the remedy cannot be satisfactorily employed. I have mentioned that the occurrence of internal complications may be prevented by the early and free employment of blistering; but in some cases we have proof of much more decided benefit being produced, for

I have seen cases in which there were very threatening symptoms of cardiac disturbance, such as are ordinarily followed by serious disease of the pericardium or valves, entirely relieved by the free blistering of the inflamed joints, and the cardiac symptoms apparently arrested.

In cases of this kind, the free discharge from the vesicated surfaces operates apparently as an outlet to the *materia morbi*, and so causes the disease to exhaust itself on the external and less important parts of the body. So satisfied have I been with the effects of the blister-treatment in cases of intense rheumatic fever, that I have gradually reduced the use of the internal remedies, giving much smaller doses of the bicarbonate or nitrate of potash, or only employing coincidentally some slight diaphoretic, as the tartrate of potash. Generally, I have seen no reason to doubt that in doing so I have acted wisely. In some very few cases, however, I have come to the conclusion that the relief to the rheumatic symptoms would probably have been more quickly obtained and have been more decided, had I relied to a less extent on the local treatment and availed myself more freely of constitutional means. As an example of this, I may particularly instance the case of a female aged 22, who was under treatment for a third attack of severe rheumatic fever during the last winter, and in whom the pericardium was affected. She was first blistered and took the tartrate of potash internally; but as the symptoms did not subside, I had recourse to the free administration of alkalies. The temperature did not subside to the natural standard till the thirtieth day of treatment, and nine days afterwards a relapse occurred, which, however, was relieved by blistering. She ultimately quite recovered, though the pericarditic friction was of very unusual duration. On the other hand, I have seen cases rapidly relieved by the application of blisters which had previously been under constitutional treatment for some time with very slight benefit.

Secondly, I have known very satisfactory results from the blister-treatment in cases in which the symptoms, both constitutional and local, were less severe, but where the patient's strength was greatly reduced either from previous attacks of rheumatism or other cause, or when the heart was already seriously diseased. In cases of this kind, the use of remedies which exercise any depressing influence is to be avoided if possible. I have, therefore, sometimes relied on the blister-treatment alone, or in combination with tonics—quinine and iron—and with very good results. The blisters, even though freely applied, do not depress the strength so much as the use of alkalies or other constitutional remedies. When the heart is diseased from a previous rheumatic attack, and when, as is generally the case, the patient is very anæmic, the use of depressing remedies is especially objectionable. In such cases, also, the attack should be arrested as quickly as possible, lest the heart should again become involved; and I know no means so likely to accomplish this as the free blistering of all the affected joints. One of the most gratifying cases of the kind occurred to me some time ago in a married woman aged 22, who had very threatening rheumatic symptoms, and old heart-disease the result of a previous attack, and who was very weak and anæmic. The joints were freely blistered, and quinine and iron were given internally, and the patient quickly recovered her usual health much more quickly than I think she would have done had she been treated by constitutional remedies. I may mention incidentally that this patient had a very characteristic presystolic murmur while in St. Thomas's Hospital; and some time afterwards I heard by accident that she had died in the Brighton Infirmary, and that the mitral aperture was found greatly contracted.

Thirdly, another class of cases, in which the rheumatic affection rather involves the smaller joints—what is often called rheumatic gout—and in which the constitutional disturbance is of a more subacute character, is also very often benefited by the use of blisters, though less decidedly than the two other forms of disease. In cases of this kind the blisters need not, however, be employed so freely as in the former cases: I also generally combine them with the internal administration of small doses of iodide of potassium, bicarbonate of potash and colchicum, and often with bark or quinine. As we all know, cases of this kind are very apt to be tedious, whatever be the plans of treatment which we adopt; but I believe that the combination of local and general remedies which I have named is generally the most efficacious means of relief.

Lastly, there are cases in which the disease rather assumes the neuralgic than the ordinary rheumatic form, where the pains follow the course of certain nerves, and are often very persistent, in which the application of blisters is very beneficial. The treatment is a very old one, but it is one which has perhaps of late years received less attention than it deserves. Very recently I had a gentleman under my care who suffered—at times very severely—from sciatica. He had been more or less an invalid for about two years, and had spent much time at the German baths and at Vichy, but had obtained very little relief. Under the application of blisters in the course of the nerve, and the interna-

use of the remedies last mentioned, he soon got quite well, and, I believe, remains so.

It will be seen from the remarks which have been made that I have employed the blister-treatment both as a means of cure, as ordinarily understood, and of relief. In many of the two former classes of cases it may be regarded as essentially curative, though the cure may be assisted by the employment of constitutional remedies. In the latter cases it can only be considered alleviative, and as an adjuvant, though a very important one, to the cure by constitutional means.

ACUTE YELLOW ATROPHY OF THE LIVER, ABORTION, AND *POST MORTEM* EXAMINATION OF MOTHER AND FÆTUS.

By ALEXANDER OGSTON, M.D., Surgeon to the Royal Infirmary, Aberdeen.

In September 1872, J. R., unmarried, a female domestic servant at a farmhouse in the parish of Turriff, Aberdeenshire, aged 21, took medicine to procure abortion, she being then four months advanced in her third pregnancy. Shortly afterwards, she was one day, after performing her ordinary morning work, and being apparently in perfect health, delivered of a fœtus. Although hæmorrhage was not excessive, her collapsed state immediately after the delivery led to Dr. Mortimer, of Turriff, being sent for. He removed the placenta, and, perceiving slight indications of jaundice, gave an unfavourable prognosis. A few hours afterwards, without having lost more blood, she died.

The *post mortem* examination of her body, performed by Dr. Mortimer and myself, gave the following results. There was jaundice of the whole skin and of both conjunctivæ. The pupils were dilated, and subcutaneous ecchymoses were present on the right shoulder, right arm, left haunch, and left shin. There were black areolæ around the nipples, and milk in the breasts. The lineæ albicantes of previous pregnancies were present. The fingers and thumbs were clenched. There were several rounded ecchymoses, in breadth from an inch downwards, under the scalp. The dura mater was yellow. There was a moderate amount of serum in the ventricles of the brain. There was *post mortem* central softening of the brain. The blood in the sinuses were fluid and cherry-coloured. The mouth and throat were pale. Brown matter was present on the teeth and back of the tongue, and black grumous matter in the trachea and œsophagus. At the lower part of the pharynx, opposite the larynx, was an oval ulcer half an inch long, longitudinal in direction, and in the process of healing. The lungs were anæmic and œdematous behind. A few ounces of pink serum were contained in each pleural cavity. The thymus gland was persistent, but small. The heart was empty; its walls were pale, soft, flabby, and friable; microscopically, its structure was fatty, the fatty granules, all of minute size, being so numerous in every muscular fibre, that few of them showed any transverse striation, and not one was healthy; no large granules or drops of fat were present, and the whole heart was equally degenerated. The stomach was pale, containing a large quantity of black grumous fluid, mixed with friable brownish knots of altered blood. The duodenum, which contained similar matter, presented a small patch of injected mucous membrane. The gall-bladder was contracted, and contained only whitish mucus. The liver was pale, yellow, and intensely anæmic; its structure was soft and friable; microscopically, the acini were crowded with fat globules, a narrow zone of the cells around the intralobular vein alone remaining free from them, and in this zone the liver-cells were cloudy and swollen. The portal veins were full of blood. The hepatic ducts contained no bile. The spleen was healthy. The kidneys were yellow, anæmic, and fatty; microscopically, the epithelium of the tubules was loaded with fatty granules, and some of the tubules contained pure fat, which spirted from their cut ends in some of the sections. The bladder was full of natural urine. The uterus was large, and contained grumous blood. The ovaries were healthy; a corpus luteum was present in the left ovary. A small quantity of blood was found in Douglas's space behind the uterus. The blood was everywhere fluid, and of a peculiar cherry colour. Small extravasations of blood, in addition to those already mentioned, were found under the mucous membrane lining the pelves of the kidneys, and under the peritoneum on the right side of the uterus.

On examining the ovum, we found the placenta and membranes still attached to the child, and a portion of the decidua lying beside them. These latter, and the decidua, were studded through their whole thickness with small ecchymoses and extravasations of blood, which were so numerous on the inner surface as to be confluent. The fœtus was nine and a half inches long, its sex undeterminable. The scarf-

skin was loose and readily detaching. There were several capillary ecchymoses on the back part of the scalp. A patch of extravasated blood, half an inch broad, lay beneath the skin on the right side of the neck. There was brown discoloration of the right leg; green discoloration of the belly. Extravasated blood was found in the lower parts of both lungs, which had not breathed. The liver was soft, containing several clots and extravasations of blood of the size of peas.

An analysis of her liver, spleen, and stomach, and of a mixture said to be the drug she was using, disclosed no trace of phosphorus. The mixture consisted of a small quantity of perchloride of iron, a bitter vegetable infusion, and a minute proportion of antimony.

CONTRIBUTION TO THE HISTORY OF PUBLIC MEDICINE.

By J. INGHAM IKIN, Esq., Leeds.

As far back as 1851, I published in the *Provincial Medical and Surgical Journal* a series of papers on the Progress of Public Hygiene and Sanitary Legislation in England, and the Advantages to be derived from their further Extension. Now that the Public Health Act of 1872 is about to be carried out, an important epoch in the history of sanitary reform has arisen; and it seems an appropriate time to supplement my former papers with a brief commentary or appendix on the progress of sanitary measures from 1851 to 1872. With this view, therefore, I have penned a short statement for the *JOURNAL* in the first place, and afterwards for the perusal of the public generally, as general information on the question of public health is much needed, and the medical profession are in a position at least to claim the credit of having been the most urgent and effective sanitary reformers—so much so that, without their agitation, combined with their writings, discussions, and practical observations, the slight progress made would have been slower even than it has proved.

The progress of sanitary reform in this country has been slow in the extreme—a fact not creditable to a practical people like ourselves. This has arisen more from apathy and lukewarmness, and from the want of a due appreciation of its national importance, than from any decided opposition or objection to the cause itself. Our heavy bills of mortality, the frequent prevalence of epidemics of a dangerous and fatal character amongst both men and beasts, the alarming illness from fever of a Prince, the spread of cholera from the East to Europe, the breaking out of the small-pox in all parts of the kingdom, the reports and warnings of our medical officials of the Privy Council, and the urgent demands of the medical profession generally, have at last induced Parliament and the Government to discuss and legislate, and a portion of a Public Health Bill has just been the result, along with the consolidation of the Local Government Board. Still, a beginning has only been made; the main work has to be accomplished, and the value of the agencies employed tested. Fortunately for the interests of the country and the health of the community, the leaders of both the great political parties in the State are now pledged to encourage and carry out a well devised system of sanitary legislation; so that no change in the Government and no party strife can check the progress of sanitary reform, in itself as important as any Church or State question.

If the public had been earlier better informed, and a knowledge of the ordinary laws of life even partially understood, we should not have been so long kept from sanitary legislation; but the fact is, people are only just beginning to understand that it is for their pecuniary interest that sanitary measures should be adopted; and at last the ratepayer is getting to understand that every preventable disease, every dangerous nuisance, and every premature death, is so much pecuniary loss, local and national. Our leading sanitary reformers have for years led the van in sanitary agitation without any pecuniary object to gain, aided by our state-paid officials, the most enlightened of our class, and philanthropic statesmen like the late Lord Brougham, the Earl of Carlisle, the Earl of Shaftesbury, etc. At last, sanitary reform has become, if not a popular question, at any rate a prominent one. Considering the array of facts that have been published during the last thirty years from time to time, showing the necessity of improved sanitary legislation, it is not creditable to our legislature that so little has been done to remedy the evils pointed out, or to protect the health of the public, check disease, and lessen mortality.

It would be tedious in the extreme to enumerate the steps that have had to be adopted, and the exertions made by different individuals, in favour of the various isolated and imperfect Sanitary Acts that have been adopted since 1851. Equally would it be a waste of time to