

under this treatment, according to the severity of the symptoms or the tendency to relapse, from three to six or seven weeks, or even longer.

My late colleague, Dr. Hyde Salter, was in the habit of using quinine in the treatment of acute or subacute rheumatism, and I have had many opportunities of observing the result, which I cannot say impressed me at all favourably. Dr. Garrod combines the quinine and alkaline treatment, using a mixture made by rubbing up the quinine with the bicarbonate of potash, a little mucilage, and some aromatic tincture, in such proportions that each ounce and a half of the mixture contains five grains of quinine (in the form of carbonate) and thirty grains of bicarbonate of potash. This dose is given to an adult every four hours, and continued as long as may be deemed desirable. Dr. Garrod speaks favourably of this combination.

Of the treatment of rheumatic fever by bleeding, mercury, colchicum, antimony, it is unnecessary to say more than that modern experience has found such agents powerful only for evil. Iodide of potassium has been a good deal used, and though of but little service, during the height of the disorder, it is often useful later on, helping us to "speed the going guest." Guaiacum is another drug which is sometimes successful in relieving the pain of the joints in the more chronic forms of articular rheumatism.

Reference must be made to the external modes of treating or assisting the treatment of rheumatic fever. Of these the chief are the hot-air bath, the application of alkaline lotion, cotton-wool, blisters, or iodine paint, to the inflamed joints. The hot-air bath has seemed, in some instances, to relieve pain, and its diaphoretic effects may be of service ineliminating the morbid material of the disease; but in a complaint like acute rheumatism, where the temperature is liable to range high, the application of external heat cannot be made without some risk, and the permanent benefit would appear to be doubtful. Besides which the excessive pain that attends any movement in the height of the disease would make it difficult, if not dangerous, to apply the remedy. The application of warmth to the affected joints is always grateful to the patient, and wrapping them up in cotton-wool or flannel generally alleviates the pain. The use of the alkaline lotion may prove beneficial, either in the same way or from some soothing influence connected with the alkali. Blisters and iodine paint are scarcely applicable during the acute stage of the disease, but are often of service subsequently by hastening the absorption of any fluid that may linger in the joints, and toning up the weakened parts. Blisters should be applied a little above the affected joint rather than over it, whilst iodine paint should be used cautiously, as,

in certain persons, it produces such an inflammation of the skin as to amount almost to erysipelas.

Such, then, was the more or less unsatisfactory state of things with regard to the treatment of articular rheumatism until within the last year or two, when Dr. Maclagan struck the keynote to a better mode of action by his researches into the use of salicin. This physician published a paper in the *Lancet* On the Treatment of Acute Rheumatism by Salicin," (*Retrospect*, vol. lxxiii., p. 34), from which it appeared that having been struck by some analogy between that disease and intermittent fever, Dr. Maclagan conceived that acute rheumatism might be of malarious origin, and receive benefit from the alkaloid derived from the willow bark. Without entering into any discussion of the theory which led to the experiments, there is no doubt that they were more or less successful, Dr. Maclagan detailing several cases of true rheumatic fever which, under the use of salicin, became convalescent, on an average, in four days. The first case treated was in November, 1874, and there is no doubt that Dr. Maclagan was the first person who drew attention to the value of salicin in rheumatism. Subsequently to the publication of the paper in the *Lancet*, large numbers of cases of the disease were treated with salicin, but with somewhat varying results, and in my own case, I confess, without any success. The dose given was generally from twenty to thirty grains, or more, every two, three or four hours, and large amounts were required to be taken before much benefit was obtained. Such was the demand for salicin that the price of the drug rose from 1s. 6d. to 10s. or 12s. an ounce; and at one time there was an absolute famine, and wholesale dealers would quote no price for it.

In the meantime German physicians had been trying the effect of the derivatives of salicin—salicylic acid and the salicylate of soda. The second number of the *Lancet* of January, 1876, contained a notice of the observations of Dr. Reiss, in the Berlin Metropolitan Hospital, on the use of salicylate of soda, chiefly in regard to its action in reducing abnormal temperatures. Now, although salicylic acid and its soda salt may be valuable antipyretic agents in many cases of high temperature independently of the nature of the disease, it soon became apparent that their good effects were especially marked in rheumatism. This led to the use of the drug in ordinary cases of rheumatic fever, and with the most satisfactory results. Some observers preferred the acid, some the soda salt. It is probable that the salicylic acid is the active agent in either case, just as the iodine is the active agent in iodide of potassium; but crude iodine is rarely given now, and in a short time I believe the salicylate of soda will be used in all cases where the action