RHEUMATIC AFFECTIONS: SOME OBSERVATIONS ON THEIR TREATMENT.

BY

J. LESLIE ORR, M.B., CH.B. GLASG.,
GLASGOW.

So much has been written on "rheumatism" that it is not without a little hesitation that I attempt to add to that mass of literature; I feel, however, that the findings set forth below, in one section especially, are worthy of note.

The greater part of the investigation was made in Manchester, a city noted for its humid climate. The conditions which I wish to discuss are: acute rheumatism or rheumatic fever; rheumatoid arthritis; osteo-arthritis; fibrositis; and Still's disease. It is in connexion with the first mentioned condition that most of the work has been done.

Acute Rheumatism.

Rheumatic fever is typically an acute febrile disease, characterized by polyarthritis and liable to be complicated by endocardial disease or hyperpyrexia. In a very large proportion of cases treatment, including keeping the patient in bed between blankets and the administration of sodium salicylate, is most effective; but there are patients who for some reason or other do not respond to this kind of treatment, or who respond up to a point and then continue in a state of irregular pyrexia for many days or weeks. Whether this failure to clear up is due to there being a more virulent strain of streptococcus, a less robust patient, or a superimposed infection, I shall not venture to say definitely. It seems quite certain, however, that most people who suffer from the effects of permanent damage to the heart belong to the "non-clearing up" group. It was with a view to promoting the prevention of cardiac damage and subsequent disability that the present investigation was commenced.

In all cases of acute rheumatism an examination of the lungs, throat, teeth, and urine was made. Fluid was removed from joints which were swollen on admission, or which remained swollen and in a state of subacute inflammation. An attempt was made to isolate an organism from these various situations, and the greatest number of positive cultures was made from the throat and teeth. A long type of streptococcus was found, and this organism was also found in fluid removed from joints, most frequently the knee-joint. Negative cultures resulted from all examinations of the urine.

An autogenous vaccine of the residual type was prepared and given subcutaneously; salicylate treatment was stopped. The first dose was 3 minims of a suspension containing 500 organisms in the minim, and thereafter injections were given every third or fourth day, increasing the dose, when possible, by 3 minims on each occasion.

In all cases a reaction followed the first injection; headache, pyrexia, sweating, and pain in the affected joints were the chief symptoms, and usually lasted for twelve to twenty-four hours. In some cases marked reaction was noted in the second and subsequent doses, but in the majority of cases only a slight reaction was perceived after that following the second dose.

A definite improvement in the patients' condition resulted, and as a rule by the end of a fortnight the patients were able to sit up in comfort, and the swelling of the joints had either completely or considerably subsided. In those cases where cardiac murmurs had been noted earlier in the illness no abnormality was noted when the patient was ultimately discharged.

The following cases have been selected from the series:

CASE I.

A man, aged 42, admitted January 26th, 1924, complained of severe pain and swelling in both knees, the left ankle, and both elbows. The throat was sore and acutely congested; the temperature was 102.4°, the pulse 104, and the respirations 28.

Treatment with sodium salicylate in large doses internally, and the application of methyl salicylate to the affected joints, was commenced immediately after admission. A few hours later the patient was very delirious and this continued through the first night. The specific gravity of the urine was 1028, albumin was present, but no other abnormal constituents. On January 29th most of the joints had improved. On examination of the heart on this date an apical systolic murmur was noted. A small amount of

fluid was removed from the right knee-joint, which did not show any improvement, and sent for bacteriological examination; a throat swab was also sent, and in each case a pure culture of a streptococcus was obtained. A vaccine was prepared and treatment with this commenced. The first dose of this autogenous vaccine was 3 minims (equivalent to 1,500 streptococci), given subcutaneously; a severe reaction followed, the temperature rising to 102.3°. Owing to the marked reaction further administration of the vaccine was withheld for one week, when 6 minims were given; again there was a reaction, but this time less severe. The third and fourth doses, each of 6 minims, were given at weekly intervals; thereafter increased doses were given every third day. The vaccine was discontinued on March 18th; by this time all pain and swelling had completely disappeared, and the heart presented no abnormality in the nature of a murmur. Hydrotherapy and massage, which had been employed for a few days, were continued, and the patient was gradually able to get up and about, and soon became his normal self.

Four months later the patient looked and felt well. He was at work and made no complaints which would suggest cardiac trouble; his heart was examined and no abnormality found. He is now in the South of England and enjoys good health.

CASE II.

A man, aged 49, was admitted on February 13th, 1924, complaining of pain and swelling in both ankles and the left wrist. Examination of the heart revealed the presence of endocarditis, and there was a systolic murmur at the apex. Sodium salicylate and methyl salicylate treatment was commenced, and on February 15th the upper left molar tooth was extracted. Above the level of the gum the tooth appeared quite normal, but the root exhibited disease; from it a streptococcus was recovered and a vaccine prepared. On February 20th 3 minims of the vaccine (equivalent to 1,500 streptococci) were given, and a few hours later a moderate reaction followed. However, when 6 minims of the vaccine were given a week later there was a very marked reaction, the temperature rising to 103.2° and the pulse to 128. Within a few hours the patient complained of sore throat and pain in the submaxillary region of the right side, and a day or two later he developed a right-sided quinsy which required incision. It is just possible that the 6-minim dose was given too soon, and it either coincided with or precipitated the quinsy. On March 20th the 6-minim dose was repeated, and a slight reaction followed. On April 12th a 12-minim dose was given and no reaction followed.

This patient was discharged on May 17th; there was slight stiffness in the right foot, but the heart was sound. Four months later he was back at work, made no complaints, and his general condition was very satisfactory. Just recently I heard that he was still working as a carter and exposed to the elements daily; he made no complaints.

Only a summary of the observations on the other conditions will be given.

Rheumatoid Arthritis.

Protein shock with *B. coli* vaccine given intravenously was the method adopted in this disease, and about 60 per cent. of the cases treated were undoubtedly benefited. On no occasion was an autogenous vaccine obtainable. Throughout the whole of the treatment of this affection only one accident occurred. This was a case of anaphylaxis, and after a few hours the patient completely recovered. No history of previous vaccine or serum treatment was elicited.

Osteo-arthritis.

Vaccines and protein shock were tried without the slightest improvement. Massage with active and passive movements were the only methods of treatment which relieved the intense suffering, and, with the exception of anodynes, drugs, given internally or externally, proved useless.

Fibrositis.

Treatment with collosol sulphur and iodine was tried. The result was indefinite, and equally good results followed the prolonged administration of potassium iodide with potassium citrate in the form of a mixture. Massage and hydrotherapy aided recovery.

Still's Disease (Children).

Salicylate treatment was first tried, but proved useless, and protein shock failed. An attempt was then made to isolate an organism and prepare a vaccine. An autogenous streptococcal vaccine was made, but its administration failed to produce any reaction at the time or any improvement, even after prolonged administration.

Conclusions.

It may appear that in many cases ordinary sodium salicylate treatment in acute rheumatism is sufficient, but I would point out that the heart is a highly specialized organ, and, once it has been damaged, repair in most cases,

perhaps all, is impossible. Treatment of acute rheumatism with an autogenous vaccine at the beginning of the illness has a definite effect in decreasing the tendency towards cardiac and other complications, and hastens recovery in other cases which might lapse into chronic deformity or tend towards hyperpyrexia.

Protein shock treatment is limited to rheumatoid arthritis; massage, hydrotherapy, and electrical treatment may be utilized in all rheumatic affections, but are usually only required after the acute stage is past.

I am indebted to Dr. C. E. Jenkins (pathologist to Salford Royal Hospital) for the preparation of the vaccines, and would refer those who desire further information about the dosage to articles by him in the *BRITISH MEDICAL JOURNAL* (1921, ii, p. 846; 1922, i, p. 596) and the *Lancet* (1922). I have also to thank Dr. J. Dudgeon Giles, medical superintendent of Hope Hospital, Pendleton, and Dr. Henry Carre, medical superintendent of Woodilee Mental Hospital, Lenzie, for permission to make the experiments and publish the results.

PRESSURE BY THE MESENTERIC ROOT UPON THE DUODENUM WITH ABSENCE OF "DUODENAL ILEUS."

BY

GEORGE ROBERTSON, F.R.C.S.ED.,

HONORARY SURGEON, DUNFERMLINE AND WEST OF FIFE HOSPITAL.

THE following case is instructive in view of the mechanical pressure theory of duodenal ileus held by some surgeons, and which I at much length have already attempted to disprove.¹

A multipara on the fourth day following the birth of her last full-time child got out of bed and soon felt giddy. A severe headache followed, and was accompanied by severe vomiting. No pyrexia existed. These symptoms continued for four weeks. Her doctor, who visited her daily, was at a loss to understand her condition. Vomiting was "propulsive" in type, of daily occurrence, was usually accompanied by headache, seldom by nausea. The vomit was partly digested food, and was occasionally bilious in character. By the end of a month the patient became very emaciated, and fits of a cerebellar type developed and became frequent. At this stage I saw her in consultation with her doctor. She was then considered too enfeebled for operation, and very soon she died. During the course of the illness only slight rises of temperature (the highest being 99.6° F.), and at many days' interval, were noted. As a rule the temperature was normal or subnormal, and the pulse rate very slow.

Autopsy showed (1) a tuberculoma, the size of a walnut, of the left cerebellum; (2) extensive tuberculous disease of the abdominal lymph glands. There was not a lymphatic area unaffected. Many of these caseous glands were as large as a small hen's egg, most were somewhat smaller. The mesenteric root was very thick and heavy with large caseous glands. There was not even a suggestion of "duodenal ileus."

The main factors that have been emphasized as capable of producing this mechanical obstruction were certainly present in this case—namely: (a) A very heavy and gross thickening of the mesenteric root where it crosses the duodenum. (b) A severe downward drag of the mesentery as a whole, the mesenteric lymphadenitis being very extensive. (c) A general visceroposis. The intestines had been suddenly relieved from pressure by the birth of the child. The feeble lax abdominal wall of this multipara, nearing death from extensive tuberculosis, could furnish little support to the viscera.

Had the cerebral symptoms not supervened a surgical enthusiast might have been tempted to anastomose the duodenum to the jejunum. Here much dexterity would have been necessary to perform this operation *secundum artem* and still surmount the almost neoplastic mesenteric root.

Had an autopsy not been made a case showing all the main elements of production of duodenal ileus (obstructive) might have been lost.

The *British Journal of Surgery* for October, 1925, contains a very excellent article by H. P. Winsbury White (London), entitled "The pathology of hydronephrosis." In this contribution a careful and experienced observer has summarily disposed of the attractive but none the less fantastic theory of dilatation of the renal pelvis by the

normal and "abnormal" renal vessels—artery and vein. In the production of duodenal ileus the superior mesenteric vessels have an even smaller part to play than those renal vessels have in causing a hydronephrosis, for so far as I am aware nobody has claimed anatomical abnormality of origin for the superior mesenteric vessels when they are supposed to obstruct the duodenal lumen.

REFERENCE.

¹ Acute Dilatation of the Stomach and Intestinal Tube with a Consideration of "Chronic Duodenal Ileus," *Surg., Gynecol. and Obstet.*, February, 1925, p. 206.

Memoranda: MEDICAL, SURGICAL, OBSTETRICAL.

INTESTINAL OBSTRUCTION BY GALL STONE.

THE following report may be of interest in connexion with the series of cases of obstruction of the small intestine due to gall stones recorded by Mr. Bennett in your issue of March 27th (p. 565).

On March 10th I was asked to see a lady, aged 66, suffering from abdominal pain and vomiting. The history was as follows: For some months she had been treated from time to time by her doctor for gall stones; owing to her general condition being very poor no operation had been advised. She had had typical attacks of gall-stone colic, clay-coloured stools, and dark urine. On March 3rd she noticed that her motions were black, and she was suffering from generalized abdominal discomfort not severe enough to call her doctor. On March 8th she vomited, and had intermittent attacks of colicky pain centred round the umbilicus; the pains lasted about five minutes and recurred about every fifteen minutes. On the morning of March 8th she had a good action of the bowels.

The vomiting became more frequent, and I saw her on March 10th; the vomitus consisted of foul small intestine contents, and her bowels had not been open since March 8th. An enema gave no result. The abdomen was distended and was tender all over. A diagnosis of acute intestinal obstruction was made, and she was admitted under my care in the West Cornwall Miners' and Women's Hospital, Redruth, for an immediate operation. When I arrived at the hospital I found that only five minutes before she had passed a small motion, formed and somewhat pale. Her general condition being very bad, and as she had not vomited since admission, it was decided to wait.

At 4 a.m. on March 11th, after a fairly comfortable night, she passed by the rectum a huge gall stone, 2 inches long and just over 1 inch through, and barrel-shaped. After passing this she felt very fit; there was no sickness and no pain. She was discharged from hospital two days later, and is now perfectly well.

This case is interesting in that, although a positive diagnosis was impossible, yet she had definite symptoms of gall-stone trouble, and also because of the fact that she escaped operation by passing a small motion five minutes before she would have gone on the table.

R. SHEARSMITH COLDREY, M.B.,
Camborne, Cornwall. B.S.Lond.

ARTHRITIC PURPURA AND PANCREATITIS FOLLOWING MUMPS.

THE following case seems to be of interest on account of the unusual symptoms following an attack of mumps.

On January 29th, during the recent epidemic, a school teacher, aged 26, contracted mumps. The parotid and submaxillary glands of both sides were affected, and there was rather severe and persistent gingivitis round the lower molars lasting for fifteen days. On the eighteenth day she sat up for an hour for the first time without any untoward results, but on the following evening, after sitting up for a short time, she was seized with severe pains in the neck and limbs, and almost simultaneously noticed a heavy petechial rash on both feet. The rash extended from the ankles over the dorsum of the feet and under the arch of the foot, and was followed briefly by fine scaling of the skin. There was no urticaria or rash elsewhere. No swelling of the joints was manifest, but pressure over either shoulder-joint, or raising the arms, caused considerable pain. The patient was kept in bed for four days, during which time the joint pains disappeared and the rash faded. On the next day she was up for about half an hour and felt quite well, but on the following day there was a faint purpuric rash on the feet, which, however, soon faded, and there were no joint pains.

On February 26th, just four weeks from the onset of the illness, on waking up she was suddenly seized with intense pain in the left loin. She vomited, and became very restless with pain and seemed to be rather collapsed. The attack seemed very similar to renal colic; the urine contained a heavy cloud of albumin, and on palpation there was great tenderness in the left loin, and