

of the right calf, and then a mild urinary infection. She was discharged on January 28, 1949, still with a slight evening pyrexia but with a haemoglobin of 90%.

On March 19 she was readmitted to hospital with a pyrexia of 99–100° F. (37.2–37.8° C.) and generalized aches and pains in the muscles and joints. Repeated blood cultures, serum agglutinations, blood counts, throat swabs, and urinary examinations were all negative, apart from an increasing degree of anaemia. Stool examinations were not carried out. A provisional diagnosis of Still's disease was made. The x-ray report stated: "Knees and wrists show calcium shift without, however, any significant joint change consistent with a generalized infective arthritis." On May 3 a biopsy of the neck gland under general anaesthesia was carried out. On the morning of the 5th the temperature rose to 102° F. (38.9° C.) and the right eyelid was noted to be swollen. Bacteriological examinations of the throat and urine revealed nothing of pathological significance. The leucocyte count was normal. Blood cultures were taken. Next day the temperature was 104° F. (40° C.), both eyelids were very swollen, and the conjunctivae were oedematous. The father now stated that the patient's mother was allergic to anaesthetics, the allergy taking the form of oedema of the eyelids. It was then recalled that after her splenectomy the patient had suffered from a marked conjunctivitis. With this in mind "antistin" was given.

On May 9 *Salm. enteritidis* was identified in the blood cultures. That evening diarrhoea began and the same organism was isolated from the faeces. Death occurred 48 hours later.

A post-mortem examination, carried out 12 hours after death, showed well-marked autolysis and discoloration of the small intestine and anterior abdominal wall. Death was due to a purulent basal meningitis, the causative organism being the *Salm. enteritidis*. No other foci were found in the body.

The organisms isolated from the blood, faeces, and meninges were all shown to have the antigenic structure—O IX, XII; H g, m—with biochemical reactions of the Danysz variety.

The source of infection was never satisfactorily established, mainly it was felt owing to the time between invasion and diagnosis.

I wish to thank Dr. R. G. M. Longridge, physician to Salisbury General Hospital, for permission to publish this case; Dr. L. H. D. Thornton, director of the Salisbury Area Pathological Service, for advice and criticism; and Dr. Joan Taylor, of the Salmonella Reference Laboratory.

H. W. H. KENNARD, M.A., M.B., B.Chir.,

Assistant Pathologist, Salisbury Area
Pathological Service.

REFERENCES

- Huang, C. H., *et al.* (1937). *Chin. med. J.*, **52**, 345.
Lynch, F. B., and Shelburne, S. A. (1930). *Amer. J. med. Sci.*, **179**, 411.
Schulz-Schmidtborn (1934). *Münch. med. Wschr.*, **81**, 1976.
Smith, J. (1921). *Lancet*, **2**, 705.
Stevenson, F. H., and Wills, L. K. (1933). *Ibid.*, **2**, 1084.

Rheumatoid Arthritis Treated with Anterior Pituitary Growth Hormone

After reading the leading article (1949) on recent discoveries of the effects of cortical hormones on rheumatoid arthritis I am prompted to describe a case unsuccessfully treated with anterior pituitary growth hormone.

Barsi (1947) described a series of cases of rheumatoid arthritis which improved considerably after the transfusion of blood from pregnant women. It seems reasonable to suppose that such improvement was most likely due to some hormone circulating in increased quantity during pregnancy. Most of the sex hormones and many others, such as thyroid, have already been tried in rheumatoid arthritis, without much success. It was therefore decided

to turn to the pituitary, which is known to have much increased activity during pregnancy.

The many hormones produced by this gland were reviewed in order to find which might most likely influence a disease of the skeletal system. The growth hormone of the anterior lobe influences the growth and development of bones; and in rheumatoid arthritis, indeed, there is rarefaction of the bone underneath the affected joint surfaces. It therefore seemed worthy of trial. The preparation used was "antuitrin growth," which is both expensive and difficult to obtain. As a result only small doses were used, even less than the recommended ones.

CASE REPORT

A married woman aged 43 had had typical rheumatoid arthritis affecting principally the fingers of both hands, wrists, knees, and right shoulder for three years. It started at the age of 40, three months after the birth of her only child. The only treatment she had undergone was some indifferent physiotherapy. She was considerably disabled by the disease, being unable to put on her coat unaided or to turn a key in a lock, but there were no permanent deformities. The E.S.R. was 13 mm. in 1 hour (Westergren); Hb, 66%; blood cholesterol, 198 mg. per 100 ml. The association with the puerperium suggested a possible endocrine basis for the disease. There were no menopausal symptoms.

The diagnosis was confirmed by an eminent physician, who advised against chrysotherapy, in view of the low E.S.R., and suggested physiotherapy. This was given for the next three months, during which time thyroid extract and hexoestrol were given in fairly large doses. There was little improvement. The E.S.R. was then 9 mm. in 1 hour; Hb, 82% (after iron therapy).

Thyroid and hexoestrol were discontinued and 1 ml. of antuitrin G was given by subcutaneous injection. She stated that there was some heaviness and soreness in her knees and wrists about 12 hours afterwards, but there were no other effects. Thereafter she received 2 ml. of antuitrin G weekly for seven weeks. At the end of this time there was no change in her condition, and the E.S.R. was 20 mm. in 1 hour. She experienced no further effects in the joints from subsequent injections. These were now increased to 2 ml. twice weekly, and this was continued for four weeks, with no improvement. The E.S.R. was now 20 mm. in 1 hour. (This had often been estimated in between but little variation was found.)

No further antuitrin G was given, and one month later chrysotherapy was instituted. From this she has benefited greatly, her E.S.R. remaining steady at about 10 mm. in 1 hour, and at the end of the first course of 1 g. of calcium aurothiomalate she was able to put on her coat unaided and to turn a key in a lock. She had not been able to perform either of these acts during the whole time that she was under observation.

During the period of this record the patient underwent continuous physiotherapy, which undoubtedly played a large part in alleviating stiffness of the joints and, doubtless, in preventing subsequent deformities.

COMMENT

The administration of anterior pituitary growth hormone in small doses over a period of three months produced no improvement. In view of the fact that very large doses of "cortisone" are required to effect improvement in this disease, and the complete failure of smaller ones, it would be interesting to observe whether much larger doses of anterior pituitary growth hormone might have any effect. However, this was not possible under the conditions of this trial.

DAVID WHEATLEY, M.B., B.Chir.

REFERENCES

- Barsi, I. (1947). *British Medical Journal*, **2**, 252.
Leading Article (1949). *Ibid.*, **1**, 812.