TREATMENT OF ADVANCED RHEUMATOID ARTHRITIS

A FEW PRACTICAL POINTS

BY

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The prognosis of advanced rheumatoid arthritis is nearly always described as being bad. The later stages of the disease are often considered as untreatable. In a recent meeting of the Section of Physical Medicine at the Royal Society of Medicine which was devoted to the treatment of this disorder none of the speakers referred to the advanced stages of the disease. Poynton (1931) has said, "When the atrophic shrivelling of the tissues supervenes, we realize that recovery of the affected parts is not possible." In fact, most writers use words reminiscent of Dryden:

For all the happiness mankind can gain
Is not in pleasure, but in rest from pain.

In the geriatric unit at St. John's Hospital, Battersea, a series of patients of this type have been treated during the past year. By means of a combined assault on the disease the team of nurses, physiotherapists, physician, orthopaedic surgeon, and occupational therapist have been able to make some progress in the majority of cases. Several lessons have been learnt; these are put on record here in the hope that they will benefit others.

Preliminary Assessment

This is a very important part of the procedure. After a general physical examination a structural and functional survey of the locomotor system is carried out. It has been realized that a deformed joint can be useful and that a few degrees of movement may form a basis for therapeutic exploitation. X-ray reports on the state of the joints are not given great prognostic weight, for many cases with alarming skiagrams have been capable of clinical improvement. All the patients in the unit have several joints affected, so that the question of priority in treatment is an important one. As a general rule it has been the practice to start with the worst non-ankylosed joint. When both arms and legs are involved walking is considered more vital than manual efficiency; but this is not an invariable decision. Where the arthritis is complicated by another disease this should be dealt with first or therapy will be ineffective. Such conditions as renal calculi, gastric ulcers, fibrositis, and various psychological disorders have all caused either temporary or permanent lack of response to anti-arthritis treatment. It is essential to get a good social history, for there are some patients who, on account of domestic trouble or lack of a home, do not want to leave the shelter of hospital. Such patients need help from the almoner, social welfare workers, and others before any great advance can be made. They use arthritis as a shield against responsibility.

Procaine Lactic Acid

The injection of procaine lactic acid (P.L.A.) into and around affected joints has been the first line of attack in all the cases treated. The technique has been described elsewhere. A few minutes after injection the joints are manipulated. Some cases benefit most by a sudden jerk, others do better with steadily increasing pressure. There is probably a maximum to the number of joints which can be manipulated at one time. So far I have never done more than seven, but some patients feel faint if more than three are stretched. A great deal depends on the number of adhesions and the state of the joint capsule. Crepitus alone is not an indication that pain is liable to follow. A rubbing or dry grating like that of leather on a glass surface is a warning of pain to come if too much pressure is exerted. Sometimes the sensation experienced as the needle goes into the joint may be a guide. A feeling as of hard nougat is often associated with much pain during the injection, so that the patient finds it hard to relax afterwards. It is thought that this sensation means the puncture of cartilage. Fibrous tissue grips

the needle, is painful on injection, and may hold the point when the syringe is withdrawn. This often detaches needle from barrel and causes patient and on-lookers to get a shower-bath. Unless this hard fibrous tissue is properly penetrated the fluid stretches it painfully, so that the patient does not relax fully when manipulated. On the other hand, if the joint cavity has been properly injected subsequent movement is not difficult. Extreme distension of the joint cavity is painful, but is often followed by clinical improvement. Snapping or cracking sounds in a joint which is being manipulated are not always indications of mobility, although they impress the patient. Rupture of an adhesion seems to cause a single noise followed by increased movement. When bleeding has followed injection, post-manipulation pain often lasts longer than normal. Yet this haemorrhage is usually found in joints which are improving, so should not be regarded too seriously.

In two cases procaine has been used in place of P.L.A. Diminution of pain, increase of mobility, and decrease of crepitus are less marked in these patients than in those who have the acid injections. Procaine is most useful where dislocation or subluxation of a joint has occurred and where local muscular tender spots are found. In these two instances it seems preferable to P.L.A. A few patients are found who dread the needle-prick and who cry or moan when injected. When this miserable state is pronounced the administration of "allonal" tablets (Roche), "sommaseds" (Duncan Flockhart), or bromide half an hour before the treatment is a useful measure. It is important to have a relaxed and, if possible, co-operative patient to obtain the best results.

Treatment

Physiotherapy.—In conjunction with the injection therapy physical methods of treatment are also used. Owing to lack of staff and equipment in the chronic hospital which houses the unit, heat was perforce administered only in the form of infra-red rays and of paraffin wax. This was carried out twice a week as a routine, but some patients occasionally had periods of intensive treatment daily for a week or ten days. A few cases had ultra-violet light. Increase of mobility was the patients' primary need, and this was promoted by class-work in remedial exercises. The spirit of competition which this engendered had an excellent effect on the morale of the patients as well as their mobility. The ward sisters visited the classes from time to time. They observed that almost every patient was capable of much more exertion than expected from their usual behaviour. This resulted in making these cases less dependent on help from the nursing staff than previously. I also learnt a great deal from watching my patients doing their exercises. As a guide to the joint most urgently needing treatment this procedure could hardly be excelled; as a measure of the response to therapy it was admirable.

Occupational Therapy.—It was realized that manipulation once a week and exercises twice or three times a week would not be enough to maintain any increased mobility in stiff joints. The use of faradism had definite limits in such cases as these, so occupational therapy was encouraged and developed. First of all, knitting was prohibited; for many an arthritic had knitted day in and day out for many years, steadily getting stiffer all the while. Secondly, all forms of occupation were allocated on prescription only. Knotting and basket work for fingers, heavy looms for elbows and shoulders, table looms or leather work for wrists, were tried as a start. Rug-making and toy-making have been added, while patients are encouraged to do some of their work in the wards as well as attending the department twice weekly. There is nothing novel in all this, but the results were better than expected in the chronic arthritics who had never done this type of work before and who were depressed from sitting all day in the same ward week after week.

Orthopaedics.—The work of the orthopaedic surgeon is a necessary adjunct to the work on chronic arthritic patients: so many of the cases have multiple deformities through lack of adequate treatment in the past. Manipulation, together with serial plasters and other splintage, has done much to remedy the "hopeless" position of so many limbs. When contracted knees have been straightened, walking exercises in a machine

or at the foot of the bed can begin. The outlook of the patient is radically altered by such procedures. One danger must be mentioned, however. The bones of most arthritic patients are decalcified and fragile. It is easy to cause a fracture by over-enthusiastic manipulation, especially under a general anaesthetic. One problem which has not been solved is that of

deformed fingers with ulnar deviation and some subluxation. The use of paraffin wax followed by faradic stimulation gives some increased mobility, but not very great improvement. A recent development has been the use of springs with Guthrie-Smith slings and a special shoe to allow traction of contracted legs (see diagram). This is giving promising results, but is probably capable of further modification and improvement.

Results

Let us first take the three failures. One patient refused to have injections after a month's experience. Another was improved to the stage of starting to walk after being in bed for two years. Her arthritis was not severe in degree, but she used it as a means of escape from the difficulties of life outside hospital and did not wish to be cured. The third patient was suffering from a psychosis, which became worse during treatment.

As a contrast three patients who were bedridden a year ago are now able to walk and to dress themselves. One, a man aged 70, needed three nurses to carry him to the bath. He had severe arthritis of both shoulders, both elbows, both wrists and hands; the knees were also involved to a less extent. He can now walk, although his knees are still slightly bent. Both shoulders move freely and the elbows have increased flexion. The left wrist has become mobile instead of being fixed in a flexion deformity. The x-ray film shows little change, but the functional alteration is immense, for the patient can now go to stay with his daughter for a week-end, needing little help to live a normal life.

The man in the next bed had both shoulders, knees, hips, and elbows involved. He had been bedridden for two years before treatment and was also blind. For six months he gave no response to weekly treatment. Then quite suddenly he began to improve. He can now walk a little, dress himself, raise both arms above his head, and extend the left elbow better than before. He has learnt to take himself to the lavatory, and consequently needs little nursing attention. The left hip still shows limitation of movement, but this joint has had only a month's treatment so far.

The third patient, a woman, had also been bedridden for two years. She had both shoulders, elbows, fingers, and knees affected, with considerable limitation of movement. She can now walk and raise both arms level with her shoulders. The elbows retain a slightly flexed position. The left one was manipulated to increase extension, but this procedure resulted in no increase of movement. The arc through which the joint moved was merely transferred nearer extension, while a portion of the previous ability to flex was lost. Consequently the patient can no longer do her own hair.

Seventeen other cases have been treated for periods varying from one month to a year. All show some increase of joint movement. One patient whose hands and wrists were involved has been discharged to her home and can do her own housework. Two remain bedridden still, but one of these had twenty-six years without treatment before coming to our notice. Both her arms have been mobilized successfully, but the legs show great deformity. As she is a frail old woman of 74,

the orthopaedic surgeon feels unable to undertake extensive operative treatment. Her neighbour of 60, who was without treatment in bed for twelve years, is improving steadily. Although both shoulders, hands, and knees are seriously affected she has recently become able to feed herself after five years, and the knees have now started to flex again. Another woman, whose knees appeared to be ankylosed, has just begun to get flexion in them after eleven months of regular weekly injections with P.L.A. It is surprising how often weeks of apparently fruitless effort will suddenly and unexpectedly produce results. At the moment it appears to me that few cases of rheumatoid arthritis are too advanced to benefit from treatment.

Summary

An account is given of the methods of treatment used for advanced rheumatoid arthritis at St. John's Hospital, Battersea.

The results of a year's use of procaine lactic acid are described.

Apart from three patients with abnormal psychology, all those treated in this way have shown some degree of improvement. Several patients who were previously bedridden are now ambulant.

It is sometimes necessary to wait several months before a patient will show response to the treatment.

It is suggested that this therapeutic procedure has improved the prognosis of advanced rheumatoid arthritis.

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OPHTHALMIC SURGERY ABROAD FACULTY OF OPHTHALMOLOGISTS

Between the two world wars several visits by groups of ophthalmic surgeons to European and American clinics were organized by the late Percival Hay, of Sheffield, on behalf of the North of England Ophthalmological Society. The idea has been taken up afresh by the Faculty of Ophthalmologists, and in the spring of 1948 three parties of twenty surgeons visited Holland, Switzerland, and Paris. The travellers are unanimous in their praise of the courtesy they received at all the centres visited. Instruction and information on special techniques and research were freely given, evidently after careful preparation, and the social side was well catered for.

The party to Holland was organized and led by Mr. John Foster, of Leeds. Visits were made to The Hague (Dr. Vos), Scheveningen, and the old university town of Leiden, where Professor van der Hoeve, the doyen of Dutch ophthalmology, together with his assistants, Drs. Copper, Binckhorst, Kok, van Wurning, and Pieck, read several papers in English and demonstrated a corneal graft operation. At Utrecht Professor Weve performed the operations of intracapsular extraction of cataract, diathermy for detached retina, and dacryocystorhinostomy, while Dr. Fischer demonstrated the use of a Goldmann contact lens for gonioscopy and showed the museum treasures. At Gröningen the emeritus professor, Dr. Rochat, demonstrated his refractometer; Professor Dekking showed a film of a cyclodialysis operation and demonstrated cases of retinitis pigmentosa treated by the subconjunctival implantation of placenta. At Amsterdam, Professor Hagedoorn performed two operations and demonstrated an apparatus for measuring orbital impressibility. Dr. Adema read a paper on squint, and some cases were examined showing the late result of corneal graft operations, fascia lata implants, and resection of the ciliary ganglion.

Zurich and Geneva

The tour of Switzerland was arranged by Mr. Muirhead and Mr. Nutt, of Sheffield. At Zurich Professor Amsler received the party, and lectures were given by Dr. Verrey on the findings from puncture of the anterior chamber; by Dr. Huber on fluorescein tests for investigating the blood aqueous barrier; and by Professor Amsler on keratoconus and on detachment of the retina. Practical demonstrations were given on the