THE TREATMENT OF ARTHROPATHIES WITH CORTISONE

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with the collaboration of

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Arthropathy cases treated with cortisone or ACTH in the Rheumatological Centre of the Medical Clinic at Milan during the period 1950-1953 total 153 and are thus distributed:

Chronic primary polyarthritis and its varieties	65
Rheumatic disease	60
Gout	8
Degenerative arthropathies and related forms	20

The series at our disposal allows some reflections in relation to each of the disease forms which we report, purely from the clinical aspect. The more significant changes in the laboratory data of this series are referred to in other communications.

(A) *Chronic Primary Polyarthritis*

1. Cortisone therapy is effective and useful in this form of disease. We prefer treatment in interrupted courses to the usual initial posologies at full doses and are using maintenance doses. These are varied in our cases from a minimum of 50 mg. to a maximum of 100 mg. a day and the preferred route has been the oral one; however, we are of the opinion that the 75 mg. dose should be exceeded only exceptionally. After each cycle of treatment, which amounts to 5-7 g., an interval is necessary, lasting from 15 to 20 days according to the case. During the interval, in the majority of cases, we have given ACTH intramuscularly or intravenously according to the functional response of the adrenals estimated by the elimination of the urinary cortical katabolites.

Our series include cases treated for more than 3 years and with total doses which exceed 100 g. of cortisone. These cases, notwithstanding an evident functional inhibition, with a sensible decrease in the basal urinary values of the 17-ketosteroids and the 11-oxycorticoids, have always responded to ACTH, even if with different intensity. Further experience has convinced us that the dangers attributed to secondary atrophy of the adrenal cortex are very slight.

2. It is convenient in the choice of cases to be treated to exclude from cortisone therapy the forms with very slight inflammatory manifestations or which have arrived at the terminal phase of ankylosis.

3. Some favourable results, even if inconstant, have been furnished by the combined salts of gold and cortisone, which we have tried in 26 cases, with dosage schemes and results which form the subject of a publication by my collaborators.

4. The well-known contra-indications are serious cardiac disease, renal insufficiency, gastroduodenal ulcer, active tuberculosis, obvious disturbance of the psyche. We have always followed these criteria.

5. Water retention has never constituted an important enough reason to discontinue the therapy; complete resolution has occurred spontaneously or with the simplest procedures. Increase in weight by fattening influences the articular burden unfavourably. Psychomotor agitation, insomnia, restlessness, some anxiety states, disturb but do not prevent therapy: acne and

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hirsuties are promptly reversible. Among the incidents observed during cortisone treatment, we recall a haemorrhage in an arteriosclerotic patient of old age and the manifestations of a coronary syndrome, electrocardiographically negative.

6. In our previous reports we have strongly insisted upon, and now emphatically point out, the possible deterioration of the disease with symptoms of particular gravity and persistence, in a small percentage of patients (less than 5%) during suspension of treatment and even during reduction in dosage; such a clinical picture, called by us 'syndrome of worsening' in order to differentiate it from 'rebound relapse' already mentioned by Hench, does not appear to be related to functional inhibition of the adrenal. The distinctive features are as follows: A true worsening of the disease rather than a lessening of therapeutic benefit; failure of corrective effect of ACTH; the necessity in some cases to relinquish hormonal therapy and in some others the necessity to revert to steadily increasing doses in order to obtain a therapeutic effect.

(B) *Rheumatic Disease*

1. Hormone therapy is our selected treatment for rheumatic disease. The dosage varies in relation to the disease phase according to a classification repeatedly given by us in previous reports. During the acute phase we follow the classical schemes, with doses gradually decreasing from 200 to 75 mg. a day (exceptionally 50 mg.) prolonged from 4-6 weeks, i.e. for the usual duration of the whole disease-process.

2. With increasing experience we have become convinced of the value of protracted treatment in rhematic disease. Careful combination with other drugs facilitates hormonal treatment.

3. We confirm the intensely beneficial action of hormonal therapy upon the symptoms of rheumatic disease, maintaining that it is a quicker, more decisive and more constant response than that obtainable with salicylate and pyrazolic preparations alone.

In acute carditis, especially its pericardial and myocardial manifestations, the value of hormonal therapy has been well demonstrated.

As for chronic carditic damage, especially endocarditis, in our opinion we can recognize preventive action only exceptionally and only when treatment has been started extremely early. More convincing is the action of long-continued treatment with the hormone in reducing myocardial damage.

4. We have frequently recognized the effectiveness of the hormone in salicylate-resistant cases, but only once have we found the contrary occurrence.

5. Collateral effects are almost negligible during the treatment of the acute phase of rheumatic disease, since the duration of treatment is relatively short. During the chronic phase of damage to the heart greater precautions are necessary. They have been analysed in previous articles: here we limit ourselves to emphasizing the special care to be given to the circulatory state of these patients, to avoid an increase in its insufficiency.

(C) *Gouty Arthropathies*

1. We confirm the value of cortisone in acute and chronic gout. In the acute form the dose varies from 150 to 75 mg. a day for short periods; in the chronic form doses of 75-50 mg. are sufficient, according to maintenance schemes like those used in the treatment of primary chronic polyarthritis. The additional use, at intervals, of 3-hydroxyphenylcinchoninic acid, is of value, and, in the light of recent favourable experience, of butazolidin.

2. The action on the blood uric-acid and on its urinary excretion have proved to be inconstant and often not comparable with the therapeutic effect.

(D) *Degenerative Arthropathies and Related Forms*

Cortisone has in our opinion very limited application in the degenerative arthropathies. Its use is justified by the presence of intercurrent inflammatory manifestations (mixed forms). Our experience suggests limited doses (75-50 mg.) and for short cycles (2-3 days) in the deforming arthrosis of the hip and in the acute phase of scapulo-humeral peri-arthritis.

SUMMARY

The authors refer to the results obtained with cortisone treatment in 153 cases of arthropathies at the Rheumatological Centre of the Milan Medical Clinic during the period 1950-1953.

The treated cases include: chronic primary polyarthritis and its varieties (65), rheumatic disease (60), gout (8), degenerative arthropaties and related forms (20).

They outline briefly the indications, the dosage, the results, the contra-indications and the collateral effects relating to the treatment of each form of disease, resulting from their experience during 3 years of systematic researches.