Indications for Intra-articular Steroid in Osteoarthritis of the Ankle and Big Toe Joints

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SUMMARY

The results of treatment with intra-articular steroid in an unselected group of patients with osteo-arthritis of the ankle and metatarsophalangeal joint of the big toe are described. From the results of this trial it is possible to lay down indications for the use of intra-articular steroid in these conditions. In the ankle joint it is suggested that symptoms must not be so severe as to be disabling, and that the interval of time between the precipitating trauma and the onset of symptoms should be as long as possible, but certainly not less than 2 years.

In osteo-arthritis of the metatarsophalangeal joint of the big toe, for intra-articular steroid injections to be of value there must be no hallux valgus deformity and at least 45° of free movement must be retained in the affected big toe joint.


Osteo-arthritis of the ankle joint and of the metatarsophalangeal joint of the big toe are common disabilities for which treatment, in general, is unsatisfactory. Although intra-articular injections of steroid enjoyed a vogue at one time, their frequent lack of success and the occasional reports of increasing joint destruction after their use, have led to a loss of interest in this form of treatment and it has to some extent, therefore, gone out of fashion! However, at times a dramatic improvement is obtained after the administration of intra-articular steroid, and this prompted this investigation into the indications for its use in osteo-arthritis of the ankle and big toe, especially as a previous investigation into osteo-arthritis of the knee joint had shown that it was possible to lay down definite indications for the use of intra-articular steroid in osteo-arthritis of the knee joint.

PATIENTS

One hundred consecutive patients, who were diagnosed by a group of orthopaedic surgeons as suffering from osteo-arthritis of the ankle joint, were included in the trial. Of these, 76 were males and 24 were females. The patients' ages varied between 26 and 58 years, the average age being 44 years.

A further 200 consecutive patients, who were diagnosed as suffering from painful osteo-arthritis of the metatar-
Osteo-arthritis of the Metatarsophalangeal Joint of the Big Toe

Of the 200 patients, 186 declared that they were not improved and required further treatment. Of the 14 patients who were satisfied, it was found that only 1 had a hallux valgus deformity, whereas in 13 there was no deformity of the big toe.

A second trial was, therefore, carried out on a further 100 patients who had osteo-arthritis of the metatarsophalangeal joint of the big toe, but who had no hallux valgus deformity. It was found that the results of intra-articular steroid injections depended largely upon the degree of free movement which was retained in the joint (Table II).

### Table II. Results of Treatment Compared with Range of Free Movement Retained in the Metatarsophalangeal Joint of the Big Toe

<table>
<thead>
<tr>
<th>Range of free movement</th>
<th>Total number of patients</th>
<th>Number satisfied</th>
<th>Number dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;45°</td>
<td>58</td>
<td>10 (16%)</td>
<td>48 (84%)</td>
</tr>
<tr>
<td>&gt;45°</td>
<td>42</td>
<td>35 (85%)</td>
<td>7 (15%)</td>
</tr>
</tbody>
</table>

Of 58 patients who had less than 45° movement in this joint, only 10 (16%) were satisfied. On the other hand, of the 42 patients who had a range of movement in excess of 45°, 35 (85%) declared themselves satisfied and required no further treatment. They were followed up for at least 2 years.

### DISCUSSION

From this trial it appears, therefore, that in osteo-arthritis both of the ankle joint and of the metatarsophalangeal joint of the big toe, there are definite indications when intra-articular steroids could be of value.

For osteo-arthritis of the ankle joint it is important that the patient's symptoms should not be so severe as to be completely disabling, and secondly, the interval between the trauma which precipitates the osteo-arthritis and the onset of symptoms should certainly not be less than 2 years—ideally, the longer this interval the better the prognosis. Where the interval is 10 years or longer, the probability of intra-articular steroids being of value is high.

In osteo-arthritis of the metatarsophalangeal joint of the big toe, intra-articular steroid is only of value in cases where, firstly, there is no hallux valgus deformity present and secondly, where a degree of free movement in excess of 45° has been retained in the joint.

In none of the 400 patients treated during this trial was there any evidence of increasing joint destruction following the short course of intra-articular steroid which was given.

### REFERENCES