Abstract

Objectives: to study the effects of the specific drug chloroquine phosphate on the symptoms and progression of osteoarthritis of the knee joint.

Patients and Methods: A randomized, double-blind placebo controlled trial in which 235 patients with primary knee osteoarthritis diagnosed according to the American College of Rheumatology were randomly assigned 250 mg oral chloroquine phosphate or placebo twice daily for one month and then once daily for two months. Patients were permitted to continue their usual treatment with nonsteroidal anti-inflammatory drugs. Symptoms were scored by the Lequesne and Samson osteoarthritis index at enrolment and every month. Weight-bearing, anteroposterior radiographs of the signal knee in full extension were taken and C-reactive protein levels were determined, at enrolment and after 3 months. Joint-space width of the medial compartment of the tibio-femoral joint was measured by visual inspection.

Results: Only 83 patients completed the 3-month trial, 40 in the chloroquine phosphate group and 43 in the placebo group.

As assessed by the Lequesne and Samson scores, symptoms showed a significantly higher improvement in patients treated with chloroquine phosphate for 2 and 3 months compared with the improvement observed in patients on placebo. A significant proportion of patients in the chloroquine group reduced their nonsteroidal anti-inflammatory drugs intake, in contrast to the placebo group. There was a significant improvement in joint-space narrowing in the 40 patients on chloroquine phosphate after 3 months. The 43 patients on placebo had no significant change in joint-space width. Final differences in joint-space width change between groups were significant (0.62 ± 0.07 mm vs 0.06 ± 0.04 mm in the placebo group, p=0.020). The two treatment groups showed essentially no significant differences in the C-reactive protein level. There were also no differences in safety or dropout rates.

Conclusions: The combined symptom-modifying and structure-modifying effects of chloroquine phosphate suggest that it might serve as a safe and effective disease-modifying agent in osteoarthritis.