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Devil's claw (*Harpagophytum procumbens*): pharmacological and clinical studies

SIR, Over the last few years a number of reports have appeared in local newspapers in the North of England and Scotland claiming 'miraculous' results for treatment with devil's claw in patients with both adult and juvenile rheumatoid arthritis.^{1 2} The preparation used was a tablet prepared from an aqueous extract of the root and manufactured in West Germany by Salus-Haus-Floradix products and imported into the United Kingdom. The product is marketed extensively throughout the United Kingdom and in 1977 it was reported that in Britain alone in the previous year 30 000 sufferers had been using it.

Devil's claw is a common name for the plant *Harpagophytum procumbens*, which belongs to the Pedaliaceae family. It grows naturally in the Kalahari desert and Namibian steppes region of South-west Africa. For centuries it has been popular among the natives of that area.

The claims that the herbal remedy devil's claw (*Harpagophytum procumbens*) is an effective anti-inflammatory and antiarthritic agent were investigated in animals and man. Our studies in rats showed that, while remarkably nontoxic, devil's claw was ineffective both against carrageenin foot swelling (1 g/kg by mouth) and against adjuvant-induced arthritis (0.1 g and 1.0 g/kg/day by mouth). Indomethacin was effective in both tests.³

Thirteen patients were given a 6-week course of devil's claw tablets containing 410 mg of aqueous extract (Salus-Haus), one tablet 3 times daily before meals. There were 5 males and 8 females with an age range between 34 and 71 years. Nine patients were suffering from seropositive arthritis, 2 from seronegative rheumatoid arthritis, and 2 from psoriatic arthropathy. Twelve patients completed the treatment programme and were observed for 6 weeks thereafter. One patient withdrew after 4 days complaining of throbbing frontal headache in the morning, tinnitus, severe anorexia, and loss of taste for food. The criterion for admission was the failure of conventional therapy to control the patients'

disease activity. The mean erythrocyte sedimentation rate (ESR) on admission was 48 mm/h. All patients showed established erosive disease, and they all gave their informed consent.

Assessments were carried out at the commencement of the study, after the 6-week course of devil's claw had been completed, and at 6 weeks thereafter. The following observations were made: pain, on a 0-3 scale; early morning stiffness on a 1-3 scale; Ritchie articular index⁴; grip strength; patient's overall impression; functional class (I-IV)⁵. Blood count, ESR, biochemical screen, and urine tests were carried out at each attendance.

Patients were asked to continue taking the medication that they were receiving before the devil's claw trial was started. Thus, there were 4 taking corticosteroids, one D-penicillamine, 5 salicylate, one chloroquine, 5 indomethacin, and 10 propionic acid derivatives.

Four patients showed some subjective or objective improvement in certain parameters, but taking the group as a whole there were no significant changes in a comparison of baseline with 6 or 12 weeks in any of the parameters measured. Both the mean Ritchie index and the mean grip strength fell at 12 weeks, but this did not reach statistical significance. The mean ESR rose from 48 mm to 56 mm throughout the course of the study. There were no significant changes in haemoglobin, white cell count, platelet count, or biochemical parameters. No urine abnormalities were detected.

No side effects were encountered in patients 1-12 inclusive. As mentioned previously, patient 13 withdrew after 4 days on account of severe side effects.

The purpose of these studies was to determine whether a prima facie case could be made for undertaking further studies in patients, including controlled studies. The results described provide little justification for such action, and the usefulness of devil's claw as an anti-rheumatic agent remains unproved.

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