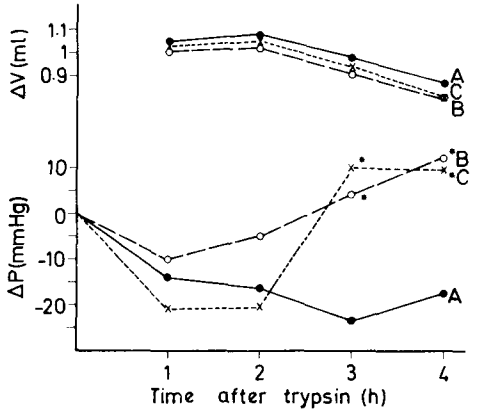


FIG. 1. Effect of indomethacin, 2 mg $kg^{-1}$ orally, on oedema and hyperalgesia induced by injection of trypsin, 1 mg, in the rat hindpaw. Upper curves, $\Delta V$ = increase in foot volume; lower curves, $\Delta P$ = change in pain threshold after trypsin injection. A = controls, vehicle only, B = indomethacin 1 h before trypsin, C = indomethacin 1 h after trypsin, 10 animals per group. Significant ($P < 0.05$) differences, drug-treated vs controls, indicated by *.

action as judged by absence of inhibition of oedema volume. Our data do not support the hypothesis that non-steroid anti-inflammatory agents can be classified on the basis of an alledged lack of action upon trypsin-induced hyperalgesia.

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# Serum sulphydryl concentrations and antirheumatic drugs in rheumatoid patients

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A question has been proposed by Pickup et al (1980) on the reliability of the serum sulphydryl (SH) concentrations in monitoring the changes induced by long-term clinical trials in patients with rheumatoid arthritis (RA), and these authors have criticized Hall & Gillan's suggestion (1979) that stimulation of sulphydryl-disulphide exchange reactions in vivo may distinguish 'specific antirheumatic' drugs from non-steroidal anti-inflammatory drugs (NSAID's) in the treatment of RA.

Clinical assessment of disease activity and treatment-related changes in RA is an old and difficult problem. In attempt to by-pass it we have always associated determination of proximal interphalangeal joints technetium index (Tc-index), erythrocyte sedimentation rate (ESR), and joint count to measurement of serum protein SH concentrations in monitoring long-term treatment-induced changes in RA patients. Serum SH concentrations were measured spectrophotometrically using 5,5-dithiobis (2-nitrobenzoic acid) (DTNB) by the original Ellman method (1959). We found that serum total SH concentration was significantly lower in 26 untreated RA patients, 17 females and 9 males, mean age 47 years (range 25 to 75), with classical or definite active RA (ARA criteria), than in age and sex matched normal subjects (mean values in RA patients, 246 s.d. 56, and in control subjects, 342 s.d. 49, $P < 0.001$).

A six month treatment with haloperidol significantly increased SH serum concentrations in all 12 treated patients, and significantly decreased Tc-index, ESR, and joint count (Grimaldi 1980a). The effects of haloperidol treatment on ESR, Tc-index as well as clinical parameters have been previously compared with indomethacin treatment (Grimaldi & Bergonzi 1980). Cyclophosphamide also has been shown to be able to significantly raise serum SH concentrations in RA patients after six months treatment and to induce a significant decrease in the Tc-index, ESR, and joint count (Grimaldi 1980b). No NSAID's were added to either haloperidol or cyclophosphamide treatment.

We believe that serum SH concentration might be used for objective measurement of disease activity and in monitoring long-acting antirheumatic drugs, along with radioisotope indices, acute phase reactants, and clinical parameters, since each method is measuring different component of the specific rheumatoid process.

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