Mechanism of Action of Sulfones

TO THE EDITOR:

In an editorial in the INTERNATIONAL JOURNAL OF LEPROSY ([2]), in a work of Seydel, *et al.* ([4]), and in a work of McDougall ([3]), the possible mechanisms of action of sulfones in leprosy are analyzed.

We have worked on this subject and published a very extensive monograph, dealing with the pharmacology and toxicology of sulfones ([1]). Our work has proven experimentally that sulfones have the following pharmacological properties:

1) The sulfones are powerful biological antioxidants. As a class, they are perhaps one of the most powerful known up to the present time. They can replace vitamin E biologically in white rats fed pro-oxidant diets. Sulfones have high activity in the formation of ceroid pigment, showing activity in a concentration of 1:100,000. Also, they prevent the decolorization of the upper central incisors and the renal autolysis postmortem in the animals.

2) The sulfones have radiosensitizing activity in white mice subjected to LD 50/30 of X rays.

3) The sulfones have hepatic enzymatic inductive activity in white rats, as determined by barbiturate sleep.

4) The sulfones have hepatoprotective activity in acute intoxication by carbon tetrachloride in white male rats. It is known that the toxicity of carbon tetrachloride and of ethanol is related to a mechanism of lipoperoxidation.

5) The sulfones are powerful carcinogens in white male rats, able to induce malignant tumors of the spleen and the thyroid.

We believe that the mechanism of action of sulfones involves its very powerful antioxidant capacity, which can explain all the pharmacological activities mentioned above.

It would be highly advisable that those who study the problem of the mechanism of action of sulfones take into account the experimental facts described in this letter, which have been summarized in the monograph concerning the sulfones ([1]) already discussed.

It should be noticed that the properties described for the sulfones are shared in major or minor degree by other antileprotics such as clofazimine, the phenylthioureas, and the antileprotic thiosemicarbazones.

—Meny Bergel, M.D.

Medical Director
Laboratorio de Investigaciones Leprológicas
E. Zeballos 3411
Rosario
Argentina

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