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The danger of cancer from drugs

Evaluation of the Potential Carcinogenic Action of a Drug. Proceedings of the European Society for the Study of Drug Toxicity, Vol. 3. International Congress Series No. 75. Excerpta Medica Foundation, Amsterdam, 1964. Price not stated.

MANY constituents of pharmaceutical preparations have been shown to give rise to cancer when tested in experimental animals.

At first sight it may seem desirable, without delay, to ban from use in any form of therapy all substances incriminated in this way. However, the situation is much too complicated to allow this simple solution.

In the first place, the gravity of a disease requiring treatment may be such that the risk that the treatment will give rise to cancer is worth taking, and, in the second place, there may be grounds for suspecting the relevance for Man of tests for carcinogenic activity conducted in animals.

The whole position is greatly complicated by the fact that whereas the benefit of an effective drug is usually apparent immediately, manifestations of its carcinogenic activity are unlikely to appear for many years.

Some of the problems of evaluating drugs for carcinogenic activity are discussed in these proceedings of the third meeting of the European Society for the Study of Drug Toxicity, in Lausanne in January, 1964.

R. Truhant, of Paris, listed therepeutic agents already suspected of carcinogenic activity and undoubtedly voiced widely-held, middle-of-the-road views in suggesting the following principles:

(a) If a drug has been shown to be carcinogenic in animals under conditions comparable to those pertaining to its therapeutic use, and if it can be easily replaced by a functionally equivalent, but non-carcinogenic product, its use should be prohibited.

(b) If a drug only produces cancer in animals under conditions quite different from those involved in its clinical use, there is no pressing need to discontinue prescribing it.

(c) Where the facts fall in between these limits, doctors who are fully informed of the potential dangers should have the freedom and responsibility of deciding each case on its merits.

At the same symposium, M. Marois (Paris), after an evaluation of the carcinogenic risks entailed in the clinical administration of oestrogens, made the following practical suggestions: (a) oestrogen administration should be avoided in women with cystic mastitis, erosions of the cervix uteri, or a family history of genital cancer. (b) The intermittent administration of oestrogens is not contra-indicated at the time of the menopause when, in point of fact, the greatest frequency of genital tumours occurs.

There was general agreement that it is not possible reliably to predict carcinogenic activity on the basis of chemical structure, and A. L. Walpole (Cheshire, England), G. Della Porter (Italy) and J. Elis and H. Raskova (Prague) kept more strictly within the title of the symposium by comparing different bioassay techniques for carcinogenicity.

In this connection, the urgent need for quicker and more reliable methods, and the possible value of procedures involving the use of newly-born animals, were stressed.

The importance of the subject of the symposium was made clear by I. Berenblum in his introductory address. He said "... one cannot but conclude that a very high proportion of human cancer is, in fact, attributable to extrinsic factors, and that such cases are, therefore, potentially preventable. Added to this is the fact that more and more artificial substances are being introduced into our 'normal' environment, the carcinogenic potentialities of which have never been tested."

—F. J. C. *Roe*