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Editorial

"It's me you're treating!"

This cry could well be interpreted as a plea from the patient who is asking to be treated as a person and not just as an item in the doctors waiting list or a neatly-pigeon-holed disease in the pharmaceutical company's research portfolio. It may well be true that for many years, as the pace of research and the increase in knowledge in the pharmaceutical sciences has led to rational treatment of so many diseases, that the "pill for every ill" philosophy has been paramount; any individual problems or needs of the patient were more for the social scientists and not quite for the purist. Scientists at the forefront of medical research may be accused of concentrating on going to the limits of what is possible with no regard for the patient's quality of life after "successful" treatment of his disease. Hopefully, society recognizes the personal needs of its members, needs which may be determined by experience or culture as much as by biochemistry.

This is not to say that there are not clear scientific reasons for considering the opening statement. At the very basic level of considering individual differences in responses to drugs, it is obvious that children should not receive the same doses as adults, although it is not so obvious that this does not always mean the dose should be proportionally less according to body weight; metabolic differences between young and old patients may complicate even this simple inference. In recent years, there has been growing attention to the study of pharmacokinetics in the elderly, particularly in the early stages of drug development. Once again this may not be a simple relationship with, say, a progressive change of half-life of a drug with increasing age. Certainly this may be generally true for a particular drug, when one plots half-life (or volume of distribution, or clearance, or whatever) against age, but there would be no guarantee that the relationship obtained will allow more precise prescribing for the individual, even if age were taken into account. The same applies to the myriad of factors that could be thought to influence the effectiveness of drugs, not least the health of the individual! Any attempt to find general relationships by studying population pharmacokinetics will always be subject to the final test; what does it mean to the individual?

The simple answer to this problem would be to develop a drug that is so specific and so safe that the dose does not matter and all the patient has to do is keep taking the medicine in large amounts until he is cured. Unfortunately, no such drug appears to be in the offing and research may have to go to the opposite extreme of tailoring the dose level, or even the formulation, to the individual. Theoretical pharmacokineticists will tell you that this is what should be done and will suggest doses should be prescribed on the basis of body weight for optimum effect or safety. But this approach has been urged for two or three decades now; it might be cynical to wonder why final formulations always turn out to be nice round numbers like 50 or 100 mg!

The ultimate in taking into account the individual make-up in prescribing a drug, which takes into account all biochemical factors, would be to prepare a biochemical profile of the patient. Every individual would carry around with him the details of his biochemical status, up-dated annually, by a battery of clinical chemistry tests.

Nor is it the intrinsic biochemical factors that could dictate the way a drug behaves in an individual patient. There may be environmental factors such as when the patient normally eats, what the patient eats (what the patient doesn't eat!), how much he drinks (aqueous or alcoholic), physical activity, and of course the presence of other drugs. There may be cultural preferences in the type of formulation, which may make the patient more or less prone to follow instructions. There may be peer or family pressure to take or not take prescribed medicines. There may be peer or family pressure to take medicines prescribed for someone else!

Even if all these intrinsic and environmental factors could be taken into consideration, the successful treatment of the patient could still depend on where he was being treated, if for example certain hospitals or practices had perferences for a particular type of treatment or a particular drug. Would the prescriber be bold or reticent in trying new approaches?

Every developed nation strains to improve the health of its people. It may do this by vaccination procedures, public health education or even modification of its water supply. The health of the nation can thus be improved and can be shown to have improved by drawing attention to overall statistics. However, a nation's health will only lie in the health of the individuals. The theme of this years British Pharmaceutical Conference will be "The Health of the Nation". The Science Conference, which will once again present important advances in the pharmaceutical sciences will have as its theme "Variability and the Individual" and will explore some of the issues mentioned above. Invited speakers will speak at symposia on "Inherited differences", "Variability and health care", and "Dealing with variability".

This ambitious programme brings together for the first time all the ingredients determining the response of the individual patient to drugs and health care, with the goal of making health care at the close of the century, truly sympathetic in the proper sense of the word.

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