

PHARMACOTHERAPY AND BASIC THERAPY WITH GINSENG PREPARATIONS FOR THE ELDERLY

Anton Maria Kirchdorfer and U. J. Schmidt
*Biological Section, International Association of Gerontology,
The Medical Dept. of Pharmaton SA.
W|GERMANY*

Treatment with drugs in old age must take into account:

1. biological peculiarities and
2. pathological processes.

These two factors reduce the capacity for adaptation, age being less important here than biological efficiency. The latter is determined, inter alia by

1. genetic factors,
2. past episodes of trauma and illness,
3. social factors, and
4. the patient's life-style,

which cause a number of involutinal or "biological" changes. Apart from these pathological processes, other peculiarities of old age are of major importance for treatment with drugs:

1. The presence of multiple disorders.
2. The often abortive, oligosymptomatic or asymptomatic course of a disease.
3. Reduced capacity for adaptation making it difficult to distinguish between physiological and pathological conditions.
4. Atherosclerosis, mostly in generalized form.

We hold the view that these "involutinal" changes do not necessarily require a special form of treatment from the qualitative or quantitative point of view. The application of drugs in old age requires, above all, a very careful individual examination of the patient's general condition. Careful treatment based on this examination cannot be

replaced by general clinical and experimental studies on the specific effects of drugs in old age.

Many authors ascribe a specific form of pharmacokinetics to old age but this is a matter of controversy. At least, it cannot be taken for granted in general. This holds especially for changes in absorption after oral administration, changes in transport, changes in distribution, etc.

However, the affinity to certain tissues, the morphological changes in the condition of tissues, organs and organ systems suggest that drugs vary in effect from patient to patient.

The following can be regarded as established facts:

1. Qualitative and quantitative changes in receptors, resulting in:
 - a reduced number of cells in the CNS and
 - a reduced number of islet cells in the pancreas.
2. Metabolic changes
 - reduced enzymatic activity
 - hormonal readjustment
3. Changes in excretion that match the limitations in kidney function and circulation.

Only a few of these many "age-specific" changes are important as regards the aging organism's different responses to drugs.

For the drug treatment of patients of advanced age the following conclusions can be drawn:
1. Priorities must be established because it is

1. neither possible nor necessary to treat all diseases or symptoms present in an old person at the same time.
2. There is no general prohibition of drugs, but in the case of cardiac glycosides, barbiturates, opiates and a number of other preparations, special attention is indicated.
3. Detailed instructions on dosage are required.
4. A major hazard for the aged patient is the sudden initiation of treatment. This holds for drugs, diet or physical training.

Thus, the primary demand can only be to use pharmacologically relevant substances for the aging organism, making sure that both excessive and inadequate dosages are avoided. In this context, the simultaneous use of several drugs, rather frequent nowadays, should be avoided or at least considerably restricted.

In addition to the specific treatment of diseases occurring in later life, increasing importance is being attached to efforts to institute a kind of non-specific geriatric basic therapy aimed at the preservation or restoration of elderly people's general capacity for adaptation and, hence, their vitality.

The market is glutted with preparations for so-called non-specific geriatric basic therapy. In marked contrast to the multitude of commercial preparations available, the range of active principles is limited. They include vitamins, trace elements, hormones, lipotropic substances, vegetable drugs, life cell preparations and procaine.

The trend towards some form of non-specific basic therapy using geriatric drugs stems from the search for ways of influencing the aging process and changes associated with old age by means of drugs.

The present state of the art sets limits to drug-induced "rejuvenation" because up to now it has only been possible to influence gene function — in other words, to raise the anabolic activity of genes — through experimental gene exchange in lower animals. While the gene pool can be influenced pharmacologically by intervening in the nucleic acid metabolism of cells, it has not yet been established whether such practices have

a delaying effect on primary aging processes.

Thus, medicine is still far from being able to influence the cause of aging as a predetermined life process.

There are wide variations of experience with such preparations in geriatric basic therapy, reflecting considerable uncertainty as to what can actually be achieved in this field. Critical experiments have shown that for the most part placebo or substitution effects were involved. If scientifically tenable results are to be obtained, the real effects of various forms of basic therapy must be substantiated by comparison between large groups of persons using verifiable methods.

Drugs to treat disorders of old age are not "rejuvenators." Their field of application is the systematic treatment of certain changes due to aging, the aim being to preserve both physical and mental fitness and the capacity for meaningful experience in old age.

This approach to basic therapy in old age will certainly facilitate finding a solution to the problem.

The second step required to determine whether the application of geriatric drugs is justified can only be to examine the effectiveness of the individual components of the preparations frequently used nowadays, to ascertain their real effects and to find out if they lend themselves to application in geriatrics.

We are of the opinion that at least two requirements must be met to justify the use of the term "geriatric drug:" First, there must be definable symptoms of disease that are likely to respond to treatment with drugs and that are at least partly attributable to the aging process. Second, the effectiveness of the drugs to be employed must have been demonstrated in rigorous clinical trials. As regards the methodical approach to such trials, "there is a tendency to sin heavily in this regard," as KANOWSKI put it. Our following statements refer specifically to a symposium held in West Berlin on the subject of so-called geriatric drugs and to the results of the discussions conducted there.

Not infrequently, no account is taken of the fact that information on the drug and the expecta-