CNS Aging and Its Neuropharmacology

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CNS Aging and Its Neuropharmacology

Experimental and Clinical Aspects

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Introduction

In recent years the rapidly increasing number of retired people and the parallel increase in social costs have attracted major attention to the opportunity for pharmacological compensation of the symptoms of aging. It is obvious that a declining brain function leads to social isolation, disorientation and apathy, which requires additional medical costs or even institutionalisation, both of which are considerably more costly. The therapeutic compensation of a decline in function for elderly people is reasonable, because it results in the preservation of good health and limits social costs to a low level.

Major endeavours have therefore been made to increase knowledge of the pathogenesis of the aging process of the brain and to improve the armamentarium for psychogeriatric treatment. This monograph reviews recent findings in gerontological brain research and tries to outline the principles of psychogeriatric therapy.

In the first section neurochemical findings in pathologic and physiologic brain aging are described. Another aspect concerns newer observations in pathophysiology
and experimental pharmacology in brain aging. Knowledge of these basic mechanisms is an important prerequisite for rational therapy in the elderly. The second part outlines the clinical consequences of diagnosis and psychogeriatric treatment in elderly people. The reader is informed about pathogenesis, diagnosis and drug therapy in geriatric medicine. Needless to say, there exists no therapeutic principle that can be used in all types of deficit symptoms of the aging brain. One of the aims of this monograph is, therefore, to demonstrate that aging of the brain predisposes this organ to a series of different diseases which need selective diagnostic and therapeutic measures. The many new and informative data show how fast this field is growing.

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For the next decades there is no realistic chance of prolonging life by genetic manipulation - and it is in fact very questionable, whether this is desirable - but reaching the physiologic limits of life is of interest only, if there is a possibility of preserving, by pharmacological intervention, an adequate intellectual function. This monograph tries to make a contribution to bridging the gap in our knowledge of pharmacologic intervention in the aging brain. This aspect of medicine is of pressing importance at the present time.

W. Meier-Ruge