THE AUTUMN OF LIFE

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—*"Does any here know Lear? This is not Lear."* — (SHAKESPEARE)
—*"Science has given us more years in which to live; now physicians must help solve the problem of giving life to those years."* — (STIEGLITZ, 1946)
—*"At the age of fifty beginneth Old Age which containeth all the rest of our lives."* — (LAURENTIUS, 1599.)

Interest in the diseases of the aged started with Aristotle nearly 2000 years ago and we find a definition of eugeria in the Rhetoric (1:5.) In 1635 William Harvey described a post-mortem he performed on a man of circa 152 (!) years, after which interest on-and-off never died. However it was only as late as the nineteenth century that a study of these diseases was made under the heading of gerocomia and the present century has seen a revival which may last. The study of diseases of children having been labled paediatrics, the study of diseases of the aged has been dubbed geriatrics and the study of their causes gerontology.

Geriatrics is not a speciality in the medical sense. It is more an attitude of mind which makes us aware of the processes and results of ageing, senescence and senility. Therefore we may almost say that geriatrics embraces all the specialities.

Geriatrics is concerned with the health and the treatment in illness of the aging and the aged. In many respects the aging are a more important group than the aged and the normal more than the abnormal for geriatrics is more preventive than curative. Geriatrics is as yet an infant science whose future depends on society as well as on scientists and the practice of constructive medicine offers great hope for its future.

The object of geriatrics is to add breadth and depth rather than mere length to life and to assist mankind to realize fully its potentialities.

In general the infirmities of the aged are an accumulation of many conditions. I have attempted, within the limitations of this short paper on so vast a subject, to discuss some aspects of geriatrics and to focus attention on a few problems that present themselves to the geriatrician.

MEDICAL ASPECTS.

Most diseases can and do occur at any time of life, but there are some the frequency of which increases after the peak of maturity is reached and which are the peculiar problem of geriatrics. These are: Circulatory and renal diseases; Metabolic dysfunction; Arthritic disorders and Neoplastic diseases. They are all degenerative disorders the cause of which is obscure; all are of a silent insidious onset and their course is characterized by a long period of increasing disability and invalidism. Diagnosis is made difficult by the overlapping of several progressive abnormalities in the same patient. The obvious conclusion here is to anticipate the diseases before they become apparent by periodic health examination on an annual basis after middle age.

Pain is the next important problem after disease. This is relieved by elevating the pain threshold with the opiates, small amounts of which in the elderly usually serve to relieve pain. Geriatric patients usually present themselves at the clinic complaining of an acute disease which on examination is found to be accompanied by one or more of the chronic diseases. Naturally one does not attempt treatment of the chronic disorder. Furthermore the acute stage may distort and mask the usually quiet chronic complaint so that accurate

evaluation is impossible. But it is important in examining this type of patient that these factors be kept in mind and that search for chronic states be instituted shortly after recovery from the acute illness.

Drugs available to Geriatricians are largely endocrine products such as insulin, adrenal cortical extracts, thyroid and liver extracts, folic acid, pancreatin, estrogens and testosterone. Practically all other drugs available act by ameliorating symptoms such as the vasodilators, sedatives, expectorants, diuretics, analgesics, antispasmodics and the antibiotics which by decreasing the severity of infectious diseases retard the development of certain degenerative disorders. Progress has been made in geriatric drug therapy but has been slow in relation to the importance of the subject.

Other medical aspects include the management of the climateric in women and not uncommonly in the male. The best and most effective is substitution therapy with natural estrogens. There is some diminution in production of androgen as men grow older which may sometimes produce symptoms similar to those of women. Testosterone is here helpful.

SURGICAL ASPECTS.

Following improved techniques and the increased availability of the antibiotics surgical risks in geriatrics are diminishing. Also the advances made in anaesthesia can now face the perilous course of major surgery in the elderly patient.

Treatment of malignacy constituted a large portion of geriatric surgery in the past. Now elective procedures are gaining importance e.g. repair of hernia in older persons (the cause of small bowel obstruction.) Also in cases of arteriosclerotic gangrene use of sympathectomy may forstall amputation. Progress of vascular surgery now offers hope of saving the limb in cases of embolism from cardiac disease. The importance of early diagnosis and surgical removal of the clot is evident. Healing of a painful ulcer may make a bedridden patient ambulatory.

Of course preventive measures will reduce the number of elderly patients attending the fracture clinic. The family of the patient should be taught to appreciate the fact that visual acuity and auditory perception is lessened and that gait and balance are impaired and that therefore rugs on slippery floors should be removed; bathing should be supervised; use of a car should be restricted. All these household hazards to the aged should be removed.

Concerning the operative procedures "an hour of gentleness is safer than ten minutes of trauma" said Rowntree. Vessels are sclerotic, tissues friable, the mesentery tears easily..... and time may be wasted trying to control bleeding caused by rough handling. Blood volume must be adequately maintained and whole blood must be available and replaced as it is lost. Shock ensues quickly and is not recovered from as rapidly as in the younger patients.

The immediate post-operative period in geriatric patients presents its peculiar complications. The benefits of early ambulation cannot be overlooked and patients should be permitted or forced to get out of bed as soon as conditions permit.

NUTRITIONAL ASPECTS

What influence has nutrition on the process of aging? Animal experiments prove that dietary measures induce significant improvement in health and longevity. In man there is direct correlation between life expectancy and nutrition.

Clinical conditions that result from malnutrition are principally the vitamin deficiency states. Obesity, on the other hand results from over-feeding as also do atherosclerosis, diabetes mellitus and senile cataract.

For women, the late fifties and early sixties are most hazardous from a nutritional standpoint. Elderly men may need more calories.

One can approach the problem of nutri-

tion in the elderly by consideration of water. Total intake of beverage fluids should be such that the 24 hour urinary volume is not less than 1500 cc.; fluid intake should vary from 2000 to 3000 cc. Proteins are important since a state of negative nitrogen balance is a common occurence and an intake of 1.4 Gm. per Kg. of bodyweight per day is recommended. Fats should be decreased. The diet vitamins should receive liberal addition. Of the minerals calcium and iron are most likely to be deficient, and anaemia is commonly encountered.

Nutritional therapy should be maintained for long periods as the response of the metabolism of old people to dietary changes is a sluggish one.

PSYCHOSOMATIC ASPECTS.

Mental changes of considerable magnitude occur naturally in the ageing process.

The most common major mental disorders in geriatric patients are senile dementia, psychosis with cerebral arteriosclerosis and involutional melancholia. The key to proper therapy lies in an understanding of the prodromal symptoms of the mental disorders of late life.

The menopausal syndrome including nervous and vasomotor symptoms is common in about 20% of all women. In its development persistent hypochondriacal trends are a warning sign.

Active treatment of actual psychoses is based largely on correction of reversible contributing factors, including circulatory disturbances; on rest and sedation; exercise, occupational and physical therapy and psychotherapy. Other methods include endocrine substitution therapy, use of cerebral stimulants in depressed patients and shock therapy.

Practically any of the neuroses, psychoneuroses and psychoses may occur in elderly patients. Also mental confusion, disorientation, memory defects and unstable emotionalism may follow physical illness fatigue, marked anaemia, long standing nutritional deficiences and congestive heart failure. When encountered in the aged they require special diagnostic and therapeutic skill.

CONVALESCENCE.

The time required for convalescence increases with age. Changes in the capacity of tissues to repair after traumatic, toxic or metabolic injury are both quantitative and qualitative. Old tissues heal well but more slowly, and there can be no question that the nutritional status of the patient plays a very major role in repair. Despite the logic of the facts it is often immensely more difficult for the physician to guide the geriatric patient through convalescence than through an acute illness; yet the importance of permitting adequate time for convalescence cannot be over-stressed. A recognition by physicians of the situation in which old people find themselves is of first importance. Patients must be taught that the world still needs them and that they should not deplore too much the loss of some of their powers but should be thankful for those that remain and continue to make use of them. In institutions, doctors and nurses using sympathy, tact and good common sense are of untold help to these patients during convalescence from diseases.

THE G.P. AND THE ELDERLY PATIENT.

It has been seen that the treatment for old age resolves itself into the early care of troubles which become chronic if neglected, and advice to those already old on how best to adjust themselves to a different way of living. No elaborate equipment or skilled manipulations are necessary, and who is better able to give the required advice than the G.P. with his knowledge of the family and of the patients, past history? He is uniquely fitted to look after the elderly patient. Here Aristotle's rule of moderation in all things should be the guiding principle in giving these people advice.

ECONOMIC ASPECTS.

Shifting in the age structure of the population with an increasing proportion of middle-aged and elderly persons cannot but create serious economic problems. The expectation of life in these last 50 years has risen from 49.2 to 68 years. As the birth-rate tends to fall and emigration is increased our population structure continues to shift. According to reliable estimates, by the year 2000 approximately 40% of Americans will be 45 or older and 13% will be over 65. Nobody has as yet estimated the future situation in Malta. Nor do we know how important the part played by the elderly will be in our national economy, consequently.

If through medical care and health-education the volume of invalidism from the affections of old age could be reduced the productive capacity of the country would no doubt be increased.

However, the greater the success of medicine and social agencies in prolonging the lives of the aged, the heavier will be the burden on the tax-payer of providing pensions, small houses, communal homes and hospital accommodation. With ruthless realism Ffranycon Roberts asks: "Are we justified in spending millions on prolonging by a few months or weeks the lives of old people suffering from incurable disease, while people who are merely suffering from old age are inadequately housed and cared for?" Part of the answer is to be found in the recent discovery that old people deemed to be suffering from incurable disease or senility are often capable of mental and physical rehabilitation. Length of years does not mean for everyone diminshed capability, for did not Cato learn Greek, Sophocles write his *Oedipus* and Goethe complete *Faust* when in their eighties? In our time we have Churchill, Toscanini, and G. B. Shaw.

CONCLUSION.

Study of the problems of aging and a practical programme for enabling men and women to use and enjoy the added years of life is a challenge, not to the medical profession alone but to all mankind. The physician's approach must change from passive defence to active attack and confidence and age must be rated by health and ability rather than by time.

Physicians can do a lot to guide geriatric patients towards continued and improved health and efficiency, but they cannot supply motivation for the effort required on the part of the patient. As Stieglitz points out: "We are entering upon an Age of age. Let us make the best of it. If further ageing comes to mean continued growth, we will succeed in enriching life immeasurably. If aging is permitted to mean arrest of progress and stagnation, the second forty years mean rust and rotting. Life is change and one of the changes is that of aging. Aging is living. The time to start building health and happiness into the later years is now."

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