The specimen is fixed in formol-saline and 50 serial sections are cut and examined from each.

The procedure for biopsy of the bulbar conjunctiva is similar except that a conjunctival suture is required to prevent retraction of the edges of the incision and the eye is kept covered for two or three days.

Twenty-eight conjunctival biopsies have been done. Ten were on material from patients with generalized sarcoidosis without ocular symptoms. Sarcoid lesions were found in three: one of these had histological confirmation by a liver biopsy and another showed typical sarcoid lesions in the conjunctiva even though a previous liver biopsy had not done so. Eighteen were patients who presented with uveitis or episcleritis of a type which suggested the possibility of sarcoidosis. Six of these were found to have generalized sarcoidosis, and four of the six had a positive conjunctival biopsy. The remaining 12 had no signs of systemic sarcoidosis, but in three of these typical sarcoid lesions were found at the biopsy. Thus in 16 patients with the generalized disease a positive conjunctival biopsy was obtained in seven.

Comment

Interpretation of the histology is more difficult than in liver or lymph nodes owing to the normal presence beneath the conjunctival mucous membrane of chronic inflammatory cells and lymphoid tissue. It is for this reason that serial sections are essential, also familiarity with the histology of sarcoidosis elsewhere. Sometimes a suspicious collection of cells proves to be the edge of a sarcoid lesion when it is traced through serial sections; on other occasions the appearance remains non-specific.

Conjunctival biopsy is a simple procedure which can be done in the out-patient department, and hence has an advantage over liver and lymph-node biopsy.

Our results also show that typical sarcoid lesions occur in a significant proportion of patients. For these reasons conjunctival biopsy warrants further trial as a means of obtaining histological evidence of sarcoidosis.

Summary

Conjunctival lesions in sarcoidosis are more common than has hitherto been suspected. A simple method of conjunctival biopsy is described which has been used in 28 cases suspected of having the disease. Results so far suggest that the procedure will prove to be of diagnostic value in sarcoidosis.

We wish to thank Professor H. A. Magnus and the medical and technical staff of his department for the histological preparations and their interpretation, and Mr. E. R. Alexander and Mr. W. Smith for the illustrations.

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The London County Council's "Safety in the Home" week, starting on November 14, is intended to arouse public awareness to the dangers of accidents in the home, and to suggest ways and means of reducing the alarming number of deaths and injuries. Special emphasis will be laid on the avoidance by simple precautions of hazards which result in burns and scalds. There will be a "Burns and Scalds" exhibition during the week, in the Belvedere Road entrance to the County Hall. As well as the widespread use of posters and leaflets, a short film called "Dangerous Ages" will be shown at a number of London cinemas.

SOME PROBLEMS IN THE MANAGEMENT OF THE AGED*

BY

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When it was suggested that I should contribute a paper at the Joint Meeting, the choice of a subject gave me much thought, for I have no academic background, and have, for 35 years, been engaged only in general practice, a sphere in which the art of medicine is perhaps as important as the science. In recent years the study of geriatrics has assumed an ever-increasing importance in our everyday life and has brought home to all of us the inevitability of old age; so it may be of interest to those living in a more free political economy to hear of some of the difficulties which old age presents in the Welfare State. Socialized or nationalized medicine is now a feature of political propaganda in almost every educated country, and in the foreseeable future you, in Canada, are almost bound to be faced with some form of national health and welfare services, and, if so, you may benefit greatly from our mistakes. I do not pretend to tell you anything you do not already know. I shall only try to indicate some of the difficulties we in Britain are endeavouring to solve.

"Grow old along with me. The best is yet to be. The last of life for which the first was made." So wrote Robert Browning. But if we are to travel to these Elysian Fields we must make adequate preparations for the journey. As a family doctor, I have been consulted on many occasions by those approaching retirement on how they can attain that "unhoped serene that men call age" with a peaceful, happy, and contented mind. I tell them: (1) have at least one ambitious project you would like to attain; (2) consider your income and draw up a tentative budget of expenditure—financial worries are a very big source of misery and unhappiness, leading to mental and physical ill-health; (3) envisage how you will spend your enforced leisure and draw up a tentative programme for your activities, but please make it flexible and elastic—the most unhappy old people I know are those who strive to live by rule and rote; (4) make a point of helping others and undertake some form of social work to avoid the awful evil of self-absorption, remembering that "age is opportunity no less than youth itself though in another dress, and as the evening twilight fades away the sky is filled with stars invisible by day." What, then, do we mean by old age? There is still much truth in the Biblical definition, "The days of our years are three-score years and ten; and if by reason of strength they be fourscore years, yet is their strength labour and sorrow."

A Mounting Problem

In Britain, administratively, we regard women at 60 and men at 65 as having reached an age justifying retirement and qualifying to draw an old age pension. Our most recent census, in 1951, showed that 12% of the population came into this category, but, of these, over 1,000,000 remained at work. The expectation of life has increased considerably in the past two decades and far exceeds the old Hindu adage which divided the span of life into "Twenty years to learn, twenty years to work, and twenty years to pray." In 1941 there were in Britain four and a half million people over

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65, and it is estimated that by 1971 there will be nine and a half million. Unless, then, the retiring age is raised, obviously the magnitude of the problem will constitute a very severe drain on the country's economy and prove an almost intolerable burden for the working population.

For some reason that no one has yet elucidated, women live appreciably longer than men. In 1954 the average expectation of life was 68 for men and 71 for women, as compared with 1931, when it was 59 for men and 63 for women. The dangers associated with child-bearing have been greatly reduced, and in the past decade the number of women who continue at work after marriage, and indeed are undertaking two full-time jobs, has steadily increased. Some research into the working hours of men and women respectively, into the responsibilities assumed by each sex, into the incidence of illness and the length of incapacity, might yield some startling information and force us to the conclusion that men were, in fact, the weaker sex.

Cause of Senescence

It is perhaps reasonable to say that we begin to age about 60, even although we are not likely to become in any way dependent upon others until 70+. We all know innumerable sprightly septuagenarians and many active octogenarians, but ageing must be admitted when our physical powers decrease in vigour and our mental alertness begins to fail. What, then, is the cause of senescence? It is not a disease but rather a normal physiological stage of life just as natural as is growth and development in childhood. The essential change is a wastage of tissue which is either not repaired at all or is replaced by another and less useful tissue—muscle fibres being replaced by fat or fibrous tissue. The brain diminishes somewhat in size and contains less fat and more fluid—the gibe “water in the brain” has some physiological basis. Nerve cells and neurones atrophy; the myocardium undergoes fatty and fibrotic degeneration. Bones become more fragile. Cartilages become ossified. Synovial fluids dry up. The skin loses its softness. The ductless glands atrophy and their secretion lessens. The reproductive glands decline, and we now know that rejuvenation by hormones or transplants is an exploded hope. The arteries harden and the veins lose their tone. The harmonious co-operation of functions begins to fail; and the inherent store of energy becomes depleted and eventually falls below the level necessary to sustain life. Such is the physiological explanation of senescence—a slow but progressive wearing down until “death stands beside me whispering low, I know not what into my ear; of his strange language all I know is there is not one word of fear.”

It is thus obvious that senescence is a very gradual thing and that many people can continue to work, though at a slower tempo, long after they are 65. How, then, are we to maintain and encourage them to remain employed? No one would suggest that a man who has worked his stint should be deprived of the right to retire while he still has vigour of mind and body to enjoy his leisure, but we can ask him if he really wants to retire. An interesting answer to that question was offered in Rutherglen, where a health centre for old age pensioners has been functioning for the past two years. Of 275 old people invited to express an opinion whether compulsory retirement was good or bad, 87% thought it was bad, 7% thought it was good, and 6% had no view to express.

Work for the Elderly

Pensionable age was fixed at a time when there was considerable unemployment and no antibiotics, but to-day there is full employment and the range of life-prolonging drugs is vastly extended. Every year medical science and improved housing and hygiene add a few months to the average citizen's expectation of life, and if this additional wealth of years is to be something other than labour and sorrow, then we must plan our economy so that the older members can still play an active part in the work and pro-

duction of the country. For the employed classes, retirement on State pension means a bare subsistence only, and, although supplementary payments may be claimed from other sources, many of these people of an independent character do not wish to obtain what they consider is charity. They consequently remain at work, even although the task is at times beyond their strength. I have often asked these people what they would really like to be done for them, and their reply is—a sheltered shop for the older men, where the tempo of work would be slowed down, where they could work shorter hours, draw their State pensions, and accept a reduced wage packet. They would still be in familiar surroundings; they would still see familiar faces; and, above all, they would still feel they “belonged” and were useful members of society within their own capacity.

We already have rehabilitation centres where the injured or sick worker is treated with special care and interest. Surely it is not too much to ask that the ageing worker, the faithful servant, should be given similar consideration, either in his old firm if it is big enough, or in some geriatric centre which might require an initial subsidy but which could quickly become self-supporting. Difficulties may arise with the trade unions, who fear dilute labour and reduction of minimum wages, but if all concerned—the Government, the unions, the employers, and the old folks—would get together and produce a scheme which is economically practical, a vast number of old people would be freed from the fear of enforced idleness and could still contribute their quota to the productivity of the country.

In Glasgow there exists a rather unique institution known as the Guild of Aid. Its primary object is to help people, and particularly old people, to help themselves. They have an employment centre where old people from 65 to 80 are taught to use knitting- and weaving-machines and instructed in rug-making. Through lack of accommodation, only 22 can be employed, and they work for four hours daily, three days a week, and earn about 15s. to £1 a week. The finished products have a ready sale and a high standard of workmanship is guaranteed. The happiness, improved health, and quiet contentment of these old men and women, who, in the late sixties, have been instructed in a new and rather technical job, is an inspiration to all who are associated with the Guild, and, what is really important, the workshop is entirely self-supporting. I commend this project to any of you who are doubtful about the ability of old dogs to learn new tricks.

Unhappiness in the Aged

In general practice one has to be something of a psychologist, and for many years I have tried to get at the root cause of the despondency and unhappiness one finds in the aged. I am sure that the chief problem with which they are worried is the feeling of unwantedness—the sense of having no vocation, no real place in the community; no feeling that they are needed by and belong to someone. It is for that reason that I stress the tremendous importance of providing for these people some kind of remunerative job to make them feel that they are useful members of the community, and not, as so many of them feel, parasites on society. The next demon we must try to exorcise for the elderly is loneliness. In the census of 1951 it was found that nearly 250,000 people over 60 were living alone. There are in Britain over 3,600 clubs under the aegis of voluntary and paid social workers—Darby and Joan clubs, Evergreen clubs, Hobby clubs—but, despite the invaluable work these do, many elderly persons are housebound. In Glasgow there are 10,000 of them who lead very lonely lives. From the doctor's angle, old men are the greatest problem. They take little interest in their homes, which soon become squalid and dirty. They themselves take little care in their personal hygiene and become untidy, unshaven, and even unwashed. They become undernourished and dyspeptic because they do not bother to cook. For them the clock just ticks away the empty hours in an empty day.

It becomes almost essential to accommodate them in a home or hostel, but unless they are given some work to do they still remain crotchety, querulous, and despondent.

Fear is a demon that, at one time or another, haunts nearly every old person—fear of ill-health, fear of poverty, fear of insecurity, fear of friendlessness. These sorts of fears perhaps affect all of us at times, but they are accentuated by the increasing feebleness which accompanies senescence. Friendly and regular contacts by the health visitor and welfare worker, and more especially a call from the family doctor, help to maintain their morale and assume an importance and value in the mind of the patient that far outweighs the sacrifice of time entailed.

Housing

The housing of the ambulant aged is one of our major problems in the Welfare State. In 1948 the Enactment of 1845, which placed on children the duty to maintain their parents, was repealed, and now many families repudiate all responsibility for the care of their aged relatives. Most doctors agree that these old people are more happy and contented in their own homes than in an institution, but, for various reasons, accommodation cannot be provided for them. Their houses may be too large or may be situated in the upper flats of a block of flats, or a growing family makes it impossible for their relatives to house them. Hostels and eventide homes have been provided by the local authorities and by charitable organizations, but these, in general, constitute a very heavy burden on the taxpayer.

The Local Authority Homes in Glasgow involve a capital expenditure of £1,000 per pensioner and a weekly maintenance cost of from £6 to £9 per person. These hostels are beautifully furnished and generously staffed. All the domestic duties are undertaken by the staff, and the old people who dwell in these gilded cages are uprooted entirely from their old environment to spend the evening of their days in what Bernard Shaw describes as "the horror of the perpetual holiday." There is need for much less pretentious accommodation. The State, when spending the taxpayers' money, seldom considers economy. The Guild of Aid, about whose pensioners' workshop I have already told you, provides unpretentious accommodation, but, having no national exchequer behind it, does this within its income, yet rendering adequate service. It provides accommodation for some 60 people, varying in age from 65 to 80, in converted houses. Each pensioner has his or her own room, to which they bring their own furniture. They are provided with gas, electricity, and hot water. They can obtain help from a caretaker or voluntary worker for slight illnesses. They do their own housework and they purchase their own food. For these rooms the capital expenditure has been about £150, and the weekly rental is 12s. 6d. The old folks are happy and contented. They have some work to do and they have a feeling of good neighbourliness towards one another. To live wholly without responsibilities, as do those in the local authority hostels, often causes mental inertia and depression and physical degeneration.

Diet and Clothing

How often are we asked by our old patients or their relatives—What shall we eat, what shall we drink, and wherewithal shall we be clothed? For many old people the zest of eating is one of their chief remaining pleasures, and it is disappointing to have to tell them that an excess of food gives them no extra energy and, indeed, unduly taxes their digestive powers. A diet giving 1,800 to 2,000 calories is ample, and the aged should always be warned that obesity is a menace. For those in good health an ordinary mixed diet is all that is necessary, with perhaps the addition of extra sugar or sweets to restore flagging energy. The moderate use of alcohol in the aged I have found to do no harm, and a little wine for the stomach's sake will assist the secretion of flagging digestive juices, whilst the nightcap may often relieve anxiety and induce sleep.

All too often the elderly wear too many clothes which are so tightly buttoned that they restrict their joint movements and obstruct the circulation. Warm but loose-fitting garments should be recommended. Exercise is necessary to maintain health and should be regular and not spasmodic. Moderation in all things is a dictum that should never be forgotten, and a pleasant friendly round of golf or a few hours on a loch with a fishing-rod can still bring solace even to the octogenarian, and if these joys are beyond his means a regular walk each day may suffice. One of the most contented of my own old patients gave as the reason for his contentment, "I always put on my boots every morning."

Clinical Problems

May we now turn to some of the clinical problems that confront us in general practice? One of these is the care of those who have become so feeble either mentally or physically that they require constant skilled attention. Fortunately, this group does not constitute more than 2% of our pensioners. Cerebral deterioration, with its attendant sequelae, is the most common reason for hospitalization. Mental deterioration frequently comes on quite suddenly after some seemingly trivial accident or emotional upset. The old persons become forgetful and confused, and quickly progress to hostility to their relatives and even to delusions of persecution. They become depressed and melancholy and lose sense of time and place. With the best will in the world these people are very difficult to retain at home, and they require admission to an institution, which should be a long-stay annexe rather than a mental hospital. Drugs have little effect on their symptoms, but after some months under skilled supervision many of them improve.

What has been the pathology of their symptoms? It has been suggested that a succession of small shocks, each in itself so transient as to be unobserved but causing gradual but progressive deterioration, may be the predisposing cause. Research into the cause is necessary. Why should two people, each with somewhat similar physical characteristics, vary so much—one maintaining his full powers and the other undergoing gross mental deterioration? Both show a diastolic pressure over 110, but why the one should remain in full mental and physical vigour whilst the other becomes a senile dement is very difficult to appreciate and might form an interesting field of research. Is there perhaps some endocrine or blood factor involved?

Hemiplegics very frequently require hospitalization. If this can be obtained soon after the onset of the lesion, a surprising degree of recovery takes place. Formerly, one tended to let these patients lie in bed at home and regard the future as being completely in the hands of God or Nature, but now bed rest is superseded by exercise and physiotherapy. The patient is quickly introduced to a Bonaped walking-machine, and from there progresses to a tripod walking-stick. In a few months many are walking around the ward with comparative freedom. During 1954, from a geriatric unit in Glasgow, 60 out of about 200 such patients were discharged home able to live a reasonably normal life. A factor which has proved of great benefit to these hemiplegics is an unpolished floor treated with spindle-wood oil at frequent intervals. To persuade a hospital matron to agree to an unpolished floor requires much tact, but the confidence shown by the patients in walking on a non-slippery surface quickly convinced those in authority that appearance might be sacrificed to comfort and efficiency.

In practice one finds that incontinence, which may be present with both the hemiplegics and the mental cases, is the one single symptom which causes greatest difficulty to relatives. The first essential is to establish the cause of the incontinence. If it has an organic base treatment may prove helpful, but if it is of senile origin drugs are of no real value. Limitation of fluids, regular use of urinals, and keeping the patient ambulant all help. For men a rubber urine-container solves the problem, but, unfortunately, the

female anatomy has been so designed that our instrument makers have not succeeded in devising any apparatus that can cope with incontinence. Faecal incontinence is often due to impacted faeces, when just a thin trickle gets past the mass. Enemas solve this problem and give much encouragement to both patients and relatives. Try to avoid colostomies in the aged. With the intelligent patient all goes well, but with the uneducated infection of the surrounding skin causes much discomfort and misery.

Severe rheumatoid or osteoarthritic cases are not common in the real old-age group. Death brings relief from their misery at an earlier age.

Cancer is not a common cause of death in the aged. Many of them die with cancer but not of cancer. The neoplasm seems to grow very slowly in the aged, and its virulence is much reduced.

Congestive heart failure is very common in ambulant elderly patients. They respond very well to bed rest and treatment with digitalis, mersalyl, and aminophylline. Many of them develop coronary disease, but this manifests itself often only by a little breathlessness, and seldom causes acute pain. An E.C.G. is diagnostic. Within three to four weeks the lesion seems to heal satisfactorily and they can be allowed up very much more quickly than the patient in his fifties.

In the respiratory diseases, pneumonia has long since lost the title of "captain of the men of death." The antibiotics have controlled the ravages of that disease, and it is seldom now that one sees a case of textbook pneumonia, but influenza and virus pneumonias still take their toll.

Foot defects cause much distress to the elderly, and it is estimated that almost 10% of those who are housebound are crippled by corns, callouses, bunions, and flat-feet. The provision of an adequate chiropody service would bring much comfort to the sufferers and would enable them to lead once again a useful and independent life.

Ferguson, a general practitioner in Paisley, observed, over 25 years, the incidence and cause of death of 280 patients in his own practice who were over the age of 70. He chose that age because they had escaped the pitfalls which engulf the middle-aged and because it was the classical conception of the allotted span. He found that 33 men and 57 women—32% of the whole—died from what he called normal senescence without any obvious active disease, "God's finger touched them and they slept." No post-mortem examinations were done, but it would have been of real interest to know what particular part in the most intricate machine ever designed—the human body—had worn out, and whether with more specialized knowledge life could have been usefully sustained for a further period.

Conclusion

What I have said may perhaps focus attention on the fact that the study of the ageing and the aged is not a hopeless and rather useless sphere of medicine. The primary function of the practitioner should not be to add to longevity but to prevent and curtail incapacity—not to add years to life but to add life to years. Research work could be undertaken by close association between general practitioners, geriatricians, and laboratory workers into such subjects as the onset of mental confusions, incontinence, and hemiplegia; are they solely due to arterial degeneration or do other factors play a part? Obesity in old women—what is the predisposing factor?

To a large extent we have conquered microbic diseases. Virus infections are gradually coming under control. We must now mobilize our resources and energies to combat the degenerative diseases, and much may be learned in that field by a close study of our ageing population.

THE ACUTE ABDOMEN IN THE AGED

BY

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This paper reviews 120 personal cases of acute abdominal emergency, excluding acute retention of urine, in patients over the age of 70. The choice of 70 years as the lower age limit is an arbitrary one, for, as is well known, some patients "wear" better than others, and the age in years is no accurate guide to the state of the tissues. Nevertheless, at this age most people have given up active work, and it is considered worth while to review the results of surgery to prolong happily a well-earned retirement threatened by sudden disaster. Several papers devoted to the surgery of old age have appeared in recent years, but none makes more than passing mention of emergencies. Childs and Mason (1949), for example, include 15 emergencies in their series of 99 cases over the age of 70 years, but do not discuss them separately.

Analysis of Results

This series is a consecutive one, and no case, however unpromising it appeared on admission, has been excluded. The mortality rate includes all patients who died in hospital, and all survivors were ambulant on discharge. The total number of cases and the mortality rates for the various conditions are arranged in five-year age groups in Table I,

TABLE I.—Mortality According to Age and Condition

	Age:	70-74	75-79	80-84	85-89	90+	Total
Intestinal obstn. ..	{ Cases	5	13	9	2	1	30
	{ Deaths	4	4	4	1	0	13
Strang. hernia ..	{ Cases	16	21	11	5	1	54
	{ Deaths	2	5	0	1	0	8
Perf. peptic ulcer ..	{ Cases	3	3	1	—	—	7
	{ Deaths	1	0	0	—	—	1
Acute appendicitis ..	{ Cases	7	5	3	—	—	15
	{ Deaths	1	0	2	—	—	3
Perf. colon ..	{ Cases	1	3	3	—	—	7
	{ Deaths	1	2	2	—	—	5
Miscellaneous ..	{ Cases	1	1	5	—	—	7
	{ Deaths	0	0	2	—	—	2
Total ..	{ Cases	33	46	32	7	2	120
	{ Deaths	9	11	10	2	0	32

which shows clearly that intestinal obstruction is by far the commonest acute surgical condition in old age and also bears a heavy mortality. There emerges also, rather surprisingly, the fact that age *per se* does not influence the mortality in operations for acute abdominal emergencies in the elderly. The total mortality of 26.7% is of the same order as the 33.5% of Owen and Murphy (1952), which included some cases of acute retention of urine, and the 32.1% recorded by Carp (1950).

Strangulated Hernia

The results in these cases are further analysed in Table II. Interesting clinical features here were the relatively high incidence of femoral hernia in old men, and the finding of the vermiform appendix, strangulated and gangrenous, in one femoral and two inguinal sacs. One

TABLE II.—Strangulated Herniae

	Males	Females	Total	Resection of Intestine	Bowel Invaginated	Deaths
Inguinal ..	19	3	22	3	0	1
Femoral ..	6	23	29	4	8	5
Umbilical ..	1	1	2	0	0	2
Incisional ..	0	1	1	0	0	0