method of neutralizing gastric acidity. We have in mind that it should be used not only during periods of active treatment of oesophageal, gastric, and duodenal ulcer but also to prevent relapse. It is the high relapse rate which has hitherto baffled all forms of therapy. If acid control can be achieved, it is reasonable to hope that recurrence of peptic ulceration, and thus chronicity, may be avoided. The tablets can replace the extra feeds of orthodox treatment and thus reduce the likelihood of obesity developing.

The main deficiency of this treatment is that it fails to control the night acid. For this a milk drip can be used.

FIG. 7.—Case of duodenal ulcer. Sucking two tablets, each containing 10 gr. of aluminium hydroxide, at fifteen-minute intervals does not control the gastric acidity during a gruel test-meal.

FIG. 8.—Curve from same patient as Fig. 7, showing that gastric acidity is controlled by sucking aluminium hydroxide (20 gr.) at five-minute intervals. Gruel test-meal.

FIG. 9.—The same case as Figs. 7 and 8. The effect of sucking M tablets continuously. The free HCl during a gruel test-meal is neutralized while the tablets are sucked.

Alternatively there are belladonna and the ganglionic paralytics, which are of value. It is agreed that belladonna has a negligible effect on gastric acidity during gastric digestion (Douthwaite, 1947), and the same criticism applies to hexamethonium bromide (Douthwaite and Thorne, 1951). Nocturnal secretion depends on a neural mechanism and can be expected to be depressed by drugs which block the vagal ganglia or nerve ends. This explains the powerful antacid effect of hexamethonium as reported by Kay and Smith (1950a, 1950b) and of large doses of belladonna given by Riddell (1951). These drugs, if used in adequate dosage, should provide the answer to controlling the night secretion.

Summary

Experiments are described which treat of the effect on gastric acidity of sucking milk-alkali tablets. It is shown that they strikingly reduce gastric acidity, and that their effect is more prolonged than that obtained by any of the customary forms of alkali therapy, apart from the milk-alkali drip. It is suggested that the continuous sucking of these tablets will hasten cure and prevent relapse of peptic ulcers.

We have to thank the staff of the Pharmaceutical Department of Messrs. Horlicks Limited for preparing and supplying the tablets for these experiments.

REFERENCES

- Douthwaite, A. H. (1939). *Practitioner*, 143, 461.
 — (1947). *British Medical Journal*, 2, 43.
 — and Thorne, M. G. (1951). *Ibid.*, 1, 111.
 Kay, A. W., and Smith, A. N. (1950a). *Ibid.*, 1, 460.
 — (1950b). *Ibid.*, 2, 807.
 Nicol, B. M. (1939). *Lancet*, 2, 881.
 Riddell, M. J. (1951). *British Medical Journal*, 2, 1498.
 Sippy, B. W. (1923). In *Oxford Medicine*, 3, 132. Oxford Univ. Press, New York.
 Winkelstein, A. (1932). *Amer. J. Surg.*, 15, 523.

AN INVESTIGATION OF THE AGED SICK IN THEIR HOMES

A SURVEY OF 215 PATIENTS IN THE BOROUGH OF ST. PANCRAS

BY

A. N. EXTON-SMITH, M.D., M.R.C.P.

Physician, Whittington Hospital, Highgate; formerly,
Medical Registrar, University College Hospital

From July, 1949, to January, 1951, all aged patients—215 (80 males and 135 females)—referred to St. Pancras Hospital for admission were visited in their homes. Their domestic state and their nursing care at home are described. This survey is highly selective compared with a random survey of the aged population—for example, Sheldon's (1948a) survey of the aged of Wolverhampton—in that all the old people were ill and considered by their general practitioners to require hospital treatment.

The age distribution, in five-year groups, was as follows:

	Males	Females
Under 65 years	12%	5%
65-69	8%	9%
70-74	21%	20%
75-79	36%	25%
80-84	17%	28%
85 years and over	6%	13%

The proportion of female patients over 80 is nearly twice that of the male patients. This supports the observation of Sheldon (1948b), who found that below the age of 80 the proportion of old people receiving medical treatment is roughly equal in the two sexes.

After the age of 80, however, he found that the proportion of men receiving treatment in relation to those not receiving it falls abruptly, while with women the reverse occurs. Sheldon suggests that "at advanced ages men are just merely holding on to life—they are by then very well or very ill—whereas women possess a hold on life which allows them to go on living even though they are in chronic ill-health."

It is interesting also to compare in the various age groups the percentages of patients with the percentages of people over 65 in the general population (Table I).

TABLE I

Age Group (Years)	Male Patients %	General Population of St. Pancras. Males %	Female Patients	General Population of St. Pancras. Females %
65-74 ..	33	73	31	69
75-84 ..	60	24	56	27
85+ ..	7	3	13	4

The percentages for the general population of St. Pancras are taken from the Registrar-General's Report (1947). This table shows that the percentages of patients in relation to the percentages in the general population increase in the higher age groups.

Social and Domestic Circumstances

It is fortunate, for the purposes of comparison, that St. Pancras was one of the boroughs chosen by the Rowntree Committee for their investigation of the social conditions of the aged. The Rowntree Report (1947a) states: "In London, as might be expected, old people are housed somewhat differently from those living in provincial cities. Compared with those in other towns, many more of London's old people live in tenements, flats, and single rooms; and relatively fewer live in individual houses." The type of dwelling occupied by the 215 aged sick of the present survey was as follows: tenements, 159 (74%); flats, 39 (18%); whole house, 10 (5%); hostel or almshouse, 7 (3%). The tenements are converted old-fashioned houses. Many of these are manifestly unsuitable for aged people, not only on account of their lack of amenities but also because of the numbers of stairs. The floor-level of the 198 patients who lived in either flats or tenements was: basement, 7%; ground, 22%; first, 29%; second, 19%; third, 19%; fourth or higher, 4%. It will be seen that less than one-quarter of the patients lived in rooms at the street level. Difficulty in managing stairs was common, and this mainly accounts for the high proportion of aged patients confined to house or room.

The stairs not only hindered many patients from getting out, but also complicated life within. Often the bathroom and lavatory, frequently shared by other tenants, were one or more flights of stairs away. Of the 159 patients living in tenements, no fewer than 59% were unable to reach the water-closet because of its inaccessibility. It was often situated in the yard outside or in the basement: for this reason commodes and pails were used in the patient's room.

In these respects the 18% of patients living in flats were fortunate in that the w.c., bathroom, kitchen, and water supply were closer at hand and on the same level as the bedroom.

In only 10 cases did the patient occupy a whole house. There were few instances of gross overcrowding, but in many the available accommodation was barely sufficient. In over half the cases where the patient lived alone he occupied a single room. In two-thirds of the cases a patient living with his spouse or one other relative occupied two rooms. In three instances four persons, including the patient, occupied two rooms.

Domestic Structure

Table II shows the marital state of the 215 patients investigated. One may note the smaller proportion of married patients in the 215 referred for hospital admission,

TABLE II.—Marital State

State		No.	%	% in Random Sample of Aged in Borough
Male	Married ..	43	54	67
	Widowed ..	23	29	25
	Single ..	14	17	8
Female	Married ..	23	17	28
	Widowed ..	93	69	52
	Single ..	19	14	20

The figures for the random sample are taken from the Rowntree Report (1947b) for the aged population of the Borough of St. Pancras.

compared with that of the general aged population. The high proportion of widows (69%) is also striking.

The household composition of the 215 patients is shown in Table III.

TABLE III.—Household Composition

	Men			Women		
	M.	W.	S.	M.	W.	S.
Living with spouse only ..	29	—	—	17	—	—
.. " " and relative ..	14	—	—	6	—	—
.. alone ..	—	9	13	—	59	17
.. with relatives ..	—	14	1	—	34	2

1. *Married Patients.*—Of the married male patients 68% lived with their spouse only, there being no other relative in the house; for female patients the proportion was higher—74%. The figures for the general population were 45% for men and 19% for women. In the present survey the high proportion of married women living with their husbands only is remarkable. The most likely explanation of this is that when the wife in an aged couple falls ill she is likely to require admission to hospital because of the difficulties arising when the domestic and nursing care depends entirely on the husband.

2. *Widowed Patients.*—Of the widowed male patients 39% were found to be living alone; for female widowed patients the percentage is 63%. In the case of widowed patients living with relatives, the daughter, often with domestic responsibilities of her own, was found to carry the heaviest burden.

3. *Single Patients.*—In this group there were 14 male and 19 female patients. Of these only one man and two women were living with relatives: the man was living with his sister and had to be admitted to hospital when she required hospital treatment for her varicose ulcer.

Patients Living Alone

A high proportion of the patients lived alone—22 of the 80 male patients (27.5%) and 76 of the 135 female patients (56%). The general practitioner attached much importance to this when referring the patient to hospital; it undoubtedly tilted the balance towards admission in many cases.

Necessity for Defining the Term "Living Alone"

Sheldon (1948c), in his Wolverhampton survey, points out the ambiguity of the phrase "living alone." Early in his investigation he visited a man in his seventies who appeared in the social survey report as living alone. True he was physically alone in the house, but two married daughters in the same street did much of his domestic work. From a functional point of view he was part of a family unit spread over three houses. The social survey of Wolverhampton, and that of St. Pancras by the Rowntree Committee, recorded patients as living alone in the sense of being alone in the house, and made no reference to regular contact with rela-

tives. Sheldon (1948c) showed that the figures had to be halved (4.8% of the sample instead of 10.7% as recorded in the social survey report) to obtain an estimate of those living really alone, without regular family contacts.

In the present survey an attempt was therefore made to discover how much the relatives living near were aiding the aged patient, and also to what extent he was getting help from neighbours and friends. Thus 22 male and 76 female patients were living alone in that there were no relatives in the same house: they can be grouped according to whether they lived entirely alone or in lodgings, and to whether the relatives were living so close that the various households functioned as one. The figures for the respective groups are shown in Table IV.

TABLE IV.—*Classification of Patients Living Alone*

	No.	Group A1	Group A2	Group A3
Male patients ..	22	6	15	1
Female ..	76	25	38	13
Total ..	98	31	53	14

Group A1 = 14.5% of the total of 215 patients; group A2 = 25%; and group A3 = 6.5%.

Group A1 is composed of patients living entirely alone—that is, either they have no relatives, or the relatives live so far away that there has been no regular contact for years. Furthermore, these patients were getting no more than casual help from neighbours. Of the 14 patients whose principal cause of admission was the fact that they were living in squalor and suffering from malnutrition and neglect, 13 were in this group: there were four men and nine women, the majority living in single rooms in tenement houses. Other tenants knew so little about these patients that it was often difficult to determine how long they had been ill. Of the six men in group A1, four had no relatives; the other two were antisocial and had quarrelled with their relatives, who, because of this, seldom visited them more than once a year. Of the 25 female patients in the group, 15 had no living relatives. Of the remaining 10, only one had a relative living in London, and this was a nephew who paid the rent of the flat.

Group A2 includes those patients living alone but getting help from neighbours and friends, patients getting a little help from relatives, and 12 living in lodgings and hostels who had no relatives, or at least no regular contact with them. Of this group seven men and 23 women were living in tenement dwellings and dependent on the help of neighbours and friends during illness. The neighbours were usually other tenants in the same house, and they helped the patients more often than did the friends.

Group A3 is the smallest group of patients living alone, and corresponds with Sheldon's group in which individuals in two or more houses function as one household. The relatives in this group were for the most part the daughter or daughter-in-law, who lived close to the patient and were able to devote a few hours each day to his care. Also in this group are eight old people who normally lived alone; but because of their illness a relative had moved to live with them in six cases, and in the other two the patient had moved to live with a daughter. In this group there is only one man who when ill went to live with his widowed daughter in her two rooms. He slept in a camp bed, but had to be admitted to hospital when too ill to be nursed at home.

Comments on Patients Living Alone

As might be expected, the proportion living alone in this sample of 215 patients is much higher than that of the aged population in general. These proportions are compared as follows:

	Males	Females
Present survey	27.5%	56%
St. Pancras aged population ..	18%	29%
Both groups refer to "living alone" in the sense that there are no relatives in the house.		

The figures for the percentage of the aged population living alone are taken from the Rowntree Report (1947b), in which "living alone" meant there were no relatives in the house. No account was taken of the proximity of relatives, nor are figures given for aged people living entirely alone—thus preventing an exact comparison.

Management of Illness in the Home

Visiting the patient's home made it possible to find out how his illness was being managed, and thus to understand the burden imposed on the rest of the community, in assessing which the mobility of the patient and the duration of his illness must be taken into account.

Table V shows that the mobility of the patients at the time they were referred to hospital was approximately the same in the two sexes. Over two-thirds were confined to bed.

TABLE V.—*Mobility of Patients*

	Males %	Females %
Confined to bed	69.0	68
.. .. room or house ..	23.5	29
Able to get outside house ..	7.5	3

The mobility of the patients living alone compared with those living with relatives is shown in Table VI.

TABLE VI

	Living Alone (M. and F.; 98 Patients)	Living with Relatives (M. and F.; 117 Patients)
Confined to bed	66.5%	70%
.. .. room or house ..	25.5%	26.5%

Duration of Illness

Table VII shows the distribution of patients according to length of time in bed, and Table VIII the length of time of confinement to the house. Neither table measures the

TABLE VII.—*Duration of Stay in Bed*

	% of 55 Males	% of 92 Females
0-1 month	76	73
1-3 months	17	13
3-6	3.5	4
Longer than 6 months	3.5	10

TABLE VIII.—*Duration Confined to Room*

	% of 19 Males	% of 39 Females
0-1 month	42	28
1-3 months	16	13
3-6	5	10
Longer than 6 months	37	49

duration of the illness, but they give an idea of the stress imposed upon those caring for the patient and of the period of care. The duration of the patients' disabilities is expressed in this way because many were unable to say how long their symptoms had lasted. Some of the bedridden patients had, of course, been confined to their rooms for a time before they had taken to their beds.

Approximately three-quarters of the patients of each sex were in bed for less than a month before admission to hospital was sought. There is not much difference in the length of stay in bed between the patients living alone and those living with relatives, with the exception that the two male and the nine female patients who had been confined to bed for longer than six months all lived with their relatives. One man had been confined to bed for two years and one woman for six years before admission was sought.

The length of time the patients were confined to their room or house (but had not yet taken to bed) is shown in Table VIII. 37% of the men and 49% of the women had kept to their room for longer than six months; the men were being cared for by relatives, whereas seven of the 19 women were living alone. One woman, living alone, had been confined to her room for five years, and another, cared for by her daughter, had not been outside the house for 10 years. This illustrates the tenacity with which old people cling to familiar surroundings in spite of severe disabilities, and their reluctance to enter hospital.

Domestic and Nursing Care

An attempt was made to discover the onus of the domestic and nursing care during the patient's illness and the sharing of this burden among relatives and neighbours. As frequently more than one person was making a contribution, the answers to such a question as "Who is looking after the patient?" are not mutually exclusive—for example, for the 80 male patients there are 102 entries in Table IX.

TABLE IX

Domestic Care by	Male Patients (80)			Female Patients (135)		
	Total %	Living Alone (22) No.	With Relatives (58) No.	Total %	Living Alone (76) No.	With Relatives (59) No.
Spouse ..	41	—	42	10	—	20
Daughter ..	18	1	18	25	—	33
Daughter-in-law ..	5	—	5	9.5	7	12
Son ..	13	1	12	4.5	3	6
Other relative ..	5	3	2	10	10	10
Neighbours ..	9	9	—	24	45	3
Patient ..	5	5	—	9	17	1
Landlady ..	4	4	—	4	8	—
Home help ..	—	—	—	4	5	3
	100	23	79	100	112	88

Sharing of Domestic Care

1. *Differences Between Male and Female Patients.*—In 41% of the male cases the housework was being done by the wife and in 18% by the daughter. In only 10% of the female cases the husband did the housework, and the daughter in 25%. Neighbours helped in the housework in 24% of the female and in only 10% of the male cases. Aged women, when they fell ill, more often continued to do the housework themselves than did the aged men.

2. *Comparison of Domestic Care for Patients Living Alone and for Those Living with Relatives.*—Patients living alone received the most inadequate domestic care. For the 22 men the neighbours did most of the housework in the case of nine, and for five the only housework was what the patient himself was able to do. For the 76 female patients living alone the neighbours were helping in 45 cases, and 17 of the patients did the housework themselves in spite of their disabilities. Patients living with relatives had an easier domestic life, the wives of the male and the daughters of the female patients taking the lion's share of the work.

Nursing Care

The partition of nursing care was essentially similar to that of the domestic care, with some differences: (1) A high proportion of the patients living alone (16 of the 22 men and 40 of the 76 women) had no nursing care. Other patients living alone received some nursing, but this was only by day—they seldom had anyone in attendance at night. (2) The neighbours, though they helped with the housework, were rarely able to help in nursing. Usually the sense of responsibility of the other tenants in the house was naturally less than that of relatives. (3) The daughter and other relatives were unable to do as much nursing as they could housework, especially in the case of patients living alone.

Qualitative Aspects.—In several cases the burden of nursing was severe and had fallen on one person for many years. In some instances patients had become unnecessarily

bedridden owing to the limited amount of help available in the home. The incontinent could seldom be managed at home for long; a false incontinence developed in some owing to the difficulty of lifting a heavy patient out of bed. Mental confusion was found to be another condition adding to the difficulties in nursing the old at home. Several patients required more skilled nursing than that which relatives and neighbours could provide. Although in the present series the contribution from professional nurses was numerically small (24 cases) it was possible in some, with their aid, to tide the patient over a short illness and thus obviate admission to hospital. Moreover, home nurses were especially useful for such procedures as injecting drugs, the dressing of ulcers and discharging sinuses, and the general care and washing of patients. MacGregor and Benjamin (1950), in an analysis of home-nursing in London, have shown that the increased demand for district nurses in the past few years is largely due to greater numbers of aged and chronic sick being nursed at home because of the shortage of hospital beds.

Further Management of the Patients

As the patients investigated were those whose continued domiciliary care the referring authority considered to be difficult, it is not surprising that 172 of the 215 patients (80%) were admitted to hospital. In 20%, however, continued treatment at home was possible; this represents a considerable saving in hospital beds. Although all the patients admitted suffered from disease, it was not always this that had made their entry to hospital a necessity. The immediate reason was selected after considering the patient's physical and mental condition and assessing his social circumstances. For simplification the illnesses have been tabulated under two headings, short-term and long-term, according to the duration of the illness before the patient was seen.

Short-term Illnesses (68 Cases)

These are here defined as illnesses of less than six weeks in which the patient is nursed at home before admission to hospital is sought. The sudden onset and the severe nature of the disability were important in determining the need for admission, more important than the fact that 36 of the 68 patients (53%) were living alone. Table X shows that there

TABLE X

Nature of Illness	Living with Relatives		Living Alone	
	No.	Average Duration (Days)	No.	Average Duration (Days)
Cerebro-vascular accident ..	12	18	7	5
Cardiac failure ..	6	27	11	6
Bronchitis and bronchopneumonia ..	8	11	11	6
Other illnesses ..	6		7	

was, however, a difference between the two groups in the duration of symptoms before reference to hospital. This is to be expected; but that many seriously ill patients living alone spent as long as six days in bed before hospital care was sought was due in some cases to the lack of knowledge of their plight.

Long-term Illnesses (104 Cases)

For patients who had been ill at home for longer than six weeks the immediate cause of admission was not always the illness itself, but some related domestic factor. The disabilities of some of the patients living alone had been relatively slight at first, but their general condition had gradually deteriorated, so that they were unable to manage by themselves. Patients who lived with relatives usually had been nursed for some time, but the general practitioner had referred them to hospital when it was realized that the strain on the family—often on one individual—could be borne no longer. The admission was often precipitated

either by a sudden increase in the burden (owing to the development of a complication such as incontinence or mental confusion) or to the family's sudden inability to bear the burden—for example, because of illness or death of a relative.

1. *Progressive Deterioration in Condition (59 Cases).*—Eighteen patients were admitted to hospital because their illnesses had become terminal. Those (7) living alone had naturally remained ambulant as long as possible. Their admission to hospital became imperative once they had taken to bed. Another 10 patients living alone had reached a stage of their illness in which they were unable to continue an independent existence. They were strongly attached to and determined to live in their homes, so they rarely wanted to go into hospital. Thirty-one patients were admitted because the relatives were unable to look after them any longer (for reasons other than illness of the relative). General practitioners had usually referred the patient to hospital because they were cognizant of the severe strain of looking after an old patient—a burden which, apart from its duration, brought with it loss of freedom or of employment, domestic difficulties, and quarrels.

2. *Development of an Acute Incident in a Chronic Illness (22 Cases).*—An acute episode in a chronic illness, or a new acute illness, in 22 chronically ill patients led to their admission to hospital. Examples were such conditions as a urinary infection with incontinence, and severe hemiplegia in patients already suffering from the effects of cerebral vascular disease or of mental confusion.

3. *Illness of the Relative (9 Cases).*—Nine patients were admitted because of illness of the relative on whom they were dependent. Usually the illness did not last long, so that it was possible to discharge the patient home when the relative had recovered.

4. *Squalor and Neglect (14 Cases).*—Fourteen patients, all living alone, were admitted to hospital because as a result of illness they were quite incapable of looking after themselves, and were getting so little help from others that they were in a state of neglect. The medical officer of health or the sanitary inspector had referred 12 out of the 14. In most cases persons living in the same tenement had requested the removal of the patient on the grounds that his presence was insanitary and a nuisance to the rest of the household. In all cases the living conditions were extremely squalid; the rooms were filthy, the furniture was dilapidated and verminous, and the smell was almost unbearable.

The neglect in which these people were was sometimes attributable to their physical state—for example, locomotor disorders confined them to the house. But it was also often due to the patient's mental condition or temperament. Some were mentally confused and disorientated; a few suffered from paranoid delusions and accused neighbours of thieving and other malpractices. More, however, were ultra-independent, so that they resented alleged interference from the neighbours, who, because of this, had given little aid until the patient's plight had become really desperate.

The patients themselves would not ask for medical aid, and indeed when it arrived they did not want to go to hospital. In some cases much persuasion was required on the part of physicians, social workers, the sanitary inspector, and neighbours. In no instance, however, was it necessary to apply to the magistrate's court for authority for compulsory removal.

Admission to hospital of cases of severe neglect rarely results in successful rehabilitation. Five of the patients died soon after admission, two were transferred to mental hospitals, and six as a result of treatment were fit for discharge to a hostel or to the care of friends. In no case was it possible for the patient to return to an independent existence at home, even though his home had been cleaned up.

Patients Not Admitted to Hospital

For 20% of the patients visited continued home care was recommended. Some required only supervision from their

general practitioner. Others needed out-patient investigation and treatment, home-helps, district nurses, or "meals on wheels." Four patients were admitted to a hostel instead of to hospital. Brooke (1948) has discussed the services that can be provided in the home, and the place of the out-patient department in the care of the aged sick.

Conclusion

The present domiciliary survey in the Borough of St. Pancras shows that only about one-fifth of the patients referred to hospital for admission were suitable for continued care at home. Yet the aim must be to treat as many patients as possible in their homes, and they should be provided with the greater part of the services they would have received had they been in hospital.

Should hospital treatment be required it must, whenever possible, be a temporary event in the life of an old person. The importance of selecting patients for admission has been stressed by Amulree *et al.* (1951). Home is the proper place for the aged: it is there that their roots are deeply implanted; and in the home are to be found their interests and their place in the family. All these valuable assets vanish if an old person is uprooted and enters hospital, where, after a prolonged stay, a decline in his faculties may take place.

I wish to thank Lord Amulree for his help and encouragement, also Dr. J. H. Sheldon for his interest and valuable suggestions.

REFERENCES

- Amulree, Lord, Exton-Smith, A. N., and Crockett, G. S. (1951). *Lancet*, **1**, 123.
 Brooke, E. B. (1948). *Med. Pr.*, **219**, 400.
 MacGregor, M., and Benjamin, B. (1950). *Med. Offr.*, **84**, 227.
 Registrar-General (1947). *Estimates of the Sex and Age Distribution of the Civilian Population*, p. 24. London.
 Rowntree Report (1947a). *Old People*, p. 31. London.
 — (1947b). *Ibid.*, p. 45.
 Sheldon, J. H. (1948a). *The Social Medicine of Old Age*. London.
 — (1948b). *Ibid.*, p. 16.
 — (1948c). *Ibid.*, p. 148.

SURGERY IN OLD AGE

BY

R. A. C. OWEN, F.R.C.S.

Visiting Assistant Surgeon, Walton Hospital, Liverpool

AND

A. FURBER MURPHY, F.R.C.S.

Late Resident Surgical Registrar, Walton Hospital, Liverpool

The purpose of this paper is to summarize the results of a consecutive series of 537 operations performed by us for a variety of surgical diseases in persons over 70 years old. With the certainty of a progressively ageing population, we are presenting this series as an indication of the general results which can be achieved.

There has been only one large recent series of cases published (Carp, 1950), and these dealt with patients over the age of 60. We think that persons of 60 are too young to be considered in the surgery of old age, and that to include them gives unduly optimistic and misleading results. Another series (Ziffren, Zager, and Cullen, 1950) of 227 operations were described in patients over the age of 80. The only recent paper in the British literature (Childs and Mason, 1949) dealing with patients over 70 described only 99 cases—too few, in our estimation, to be of real value.