

THE PATHOLOGY OF FAMILY LIFE

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GENERAL PRACTICE today stands at the cross roads. When we try to justify it as a separate branch of medicine, we claim that its very generality enables us to see the whole picture, to identify disease against its natural background of minor illness and social upheaval and to understand it longitudinally in family life over several generations. Lest these claims be mere platitudes, I propose to discuss whether they have an academic basis and, if so, whether we ought not to adopt the family rather than the individual as our basic unit for the study of disease.

I propose to discuss social heredity and how it can produce disease, genetic heredity and how it can be modified by social and environmental factors, and I hope to show that to record this knowledge can influence our understanding of the individual family and of the way the family fits into the community. To do this, I shall use as clinical material, 187 patients collected from my own practice, whose emotional symptoms led me to give them 'long interviews'. In each case I have tried to identify the earliest major social factor that seemed responsible for the patients subsequent history, and the following table shows the incidence of certain factors to which I shall refer.

TABLE I

INCIDENCE OF CERTAIN SOCIAL FACTORS IN THE CHILDHOOD OF 187 EMOTIONALLY DISTURBED PATIENTS

| | <i>Males</i> | <i>Females</i> | <i>Total</i> |
|----------------------------|--------------|----------------|--------------|
| Loss of parent | 17 | 49 | 66 |
| Cruel father | 11 | 23 | 34 |
| Domineering mother | 1 | 11 | 12 |
| Open rejection | 1 | 13 | 14 |

Social heredity

In social heredity there is a transmission of personality characteristics from one generation to another through a pattern of relationships in a manner that

might easily be confused with biological inheritance. The vehicle of transmission is not the germ plasm but a psychogenic influence of parent on child.

That is Hilgard's (1951) definition and we all know that children naturally adopt parental standards and attitudes. There are three types of family to be considered:

1. The 'normal' family injured by the accident of parental loss in childhood—*bereavement*.
2. The family containing abnormal interpersonal conflicts in childhood. These conflicts are, in fact, complicated but seen in retrospect through the 'black and white' eyes of childhood they can be classified easily as
 - (a) Father's abnormal conduct—*cruelty*.
 - (b) Mother's abnormal conduct—*maternal dominance*.
 - (c) *Rejection* which may be *open* or *concealed*.
3. *Assortative marriages* between children from affected families.

Bereavement (see Table II).

Bereavement is common (Munro 1965); Why then are some more vulnerable to bereavement than others? This depends on the child's age at the time, his birth rank and the degree to which the surviving parent fills the gap. Adjustment is best where the child has already had ten years of happy home life and when the remaining parent does not remarry but, instead, keeps the home intact and endeavours to act as both father and mother (Hilgard *et al.* 1960). Remarriage may produce tension with the step-parent and if the home is disrupted, as often happens when the mother dies, gross insecurity may result. Even if there is no remarriage and if the home remains intact, there may be a price to pay, for the surviving parent and children may become emotionally interdependent. This attachment is particularly marked between mother and son and the son may even fail to marry.

An interesting sidelight on this situation is to be found in Johnson's *Lives of the English Poets*. Of the poet Cowley we are told that his father died before the birth of his son and consequently left him to the care of his mother who lived to the age of 80. Cowley, says Johnson, "justly paid the dues of filial gratitude". Certainly he never married though he wrote much of women and of love. A significant verse of Cowley's suggests that he may have preferred to love his mistress in fancy only

Thou in my fancy dost much higher stand
Than women can be plac'd by Nature's hand
And I must needs, I'm sure a loser be
To change thee, as thou'rt there, for very thee.

('Against Fruition')

The father of another poet, James Thomson, died leaving all his children to the care of their mother. In a letter to his sister Thomson later explains that "his circumstances have been so variable and uncertain in this fluctuating world as to prevent his marrying, and

now that they are settled, he is too old for such youthful undertakings.

William Shenstone lost his father at the age of ten and, two years later, his grandfather. He and his brother were left to the care of their grandmother. Both died unmarried, though, Dr Johnson tells us, Shenstone might have obtained the lady to whom his Pastoral Ballad was addressed.

When forc'd the fair nymph to forego
 What anguish I felt in my heart
 Yet I thought—but it might not be so,
 'Twas with pain that she saw me depart.

Even if he succeeds in marrying, a son with such a history may fail to make a success of his marriage and it may end in divorce or desertion, thus bequeathing to his children the situation from which his own troubles arose—a fatherless home. If, on the other hand, there is no divorce, the marriage may contain interpersonal tensions between husband and wife and the resultant discord may have a harmful effect on the children. This leads me to my second type of family—that containing abnormal interpersonal conflicts.

Cruelty and maternal dominance

There is a significant contrast in the attitude of patients when they complain retrospectively of their parents' abnormal conduct. A father's conduct is described as 'cruelty' and it is cruelty to the mother—often physical violence in association with drunkenness—that is chiefly resented. Such conduct seems to provoke a close attachment between the children and the mother and leads to emotional interdependence similar to, or even stronger than, that caused by the loss of a father.

On the other hand, mothers who act abnormally are usually described as 'domineering' and patients complain of the mothers' conduct towards themselves. Domineering mothers appear much less frequently in patients' histories than cruel fathers but they seem to inflict deeper emotional damage on their children who evince no compensatory attachment to the father, regarding him as neutral at best, or an accomplice at worst. The children of domineering mothers are most unsuccessful in their own marriages. Out of 12 such patients in my series, seven were very unhappy. Of these, one marriage ended in divorce, one in separation, one is on the verge and, of the three who married twice, two were unhappy in both marriages. Domineering mothers enslave their children. Rejecting mothers disown them. But these two attitudes are merely two sides of one coin, for the relationship is always an ambivalent one.

Rejection

Open rejection occurred in 14 of my cases, 12 patients were sent

away from home to live with the grandmother, one to a maiden aunt and one to strangers. Of these, ten were eldest children and all were under five years of age at the time. This pattern may be handed down from one generation to the next.

A woman of 67 years, eldest of three children says she was rejected by her parents to the care of a maiden aunt. When she married she, in her turn, left her only child to the care of her mother, and when her daughter produced a grand-daughter it was my patient and not the daughter who had most to do with her upbringing—thus carrying the pattern to the third generation.

A woman of 46 years, eldest of three children, was brought up by her maternal grandmother. When my patient was six years old the grandmother died and she was sent to an aunt. When she was ten years old the aunt married and, only then did she return to her mother and father. She, in her turn has married and allowed her eldest son to be brought up by her own mother who rejected her. Now, that son is 17 years old and wished to leave home, but the patient will not consent because the thought of his going upsets her parents with whom he lives. This two generation pattern also illustrates the emotional dependency of the grandparents on the grandchild.

Such patterns are not peculiar to North Wales. In Buganda it was traditional for a child to be sent at three years of age to the grandparents or to the father's sister or brother (Welbourn 1963) and it is recognized there that such children may suffer severely from maternal deprivation as well as running an increased risk of developing kwashiorkor. In Nottingham, Newson (1963) reported mothers being brought up by relatives although their own parents were alive and often only a few streets away. "Usually it was the mothers' grandmother who had taken her over—most often, it seemed, almost by accident; in one case the adopter was an aunt." Children may be rejected even though they remain in the home. I have called this 'concealed rejection' although the difference between the rejecting and the domineering mother is, as I have said, indistinct.

A woman of 32 years, eldest of seven children, was sent to live with her paternal grandmother at the age of six months. She has kept her own children at home but openly states she never wanted them and doesn't like them. She feels she might "treat them like her mother" and is always shouting at them. In retrospect her children will probably call her 'domineering', although we may regard it as 'rejection'.

It is interesting that of the 12 patients who accused their mothers of being domineering, two have themselves left their eldest children in the care of the mothers they complain of.

One of these, aged 30, is the younger of two children. Her mother is outwardly aggressive and intolerant and sent my patient's elder brother away to the grandmother until he was 12 years old. Towards my patient she was always unfriendly yet my patient has allowed her eldest son to live with that mother and he refuses to return home! Was that child rejected by his mother or captured by a domineering grandmother—or both?

Illegitimacy may cause rejection. No such case could be included in my 14 cases of open rejection because the adoption of an illegitimate child, at birth, by the mother's parents is a time-honoured solution which need not involve rejection at all. Rejection is more likely when the child is retained by the mother. One illegitimate patient was thrashed frequently and severely by her mother who used to say: 'You are like your father—a bad lot'. It is interesting that in one case there was a three generation pattern of illegitimacy. This patient, the elder of two illegitimate children, herself had one illegitimate child and her legitimate daughter had three illegitimate children prior to marrying.

Assortative marriage

In discussing these patterns of social heredity I have assumed that one parent has been predominantly the carrier who has imported disruptive psychological attitudes into a family. But both may be carriers and this by no accident but by the process of assortative marriage. Just as two of my patients, not in the series, met whilst undergoing orthopaedic treatment for poliomyelitis and another two married having met at a deaf and dumb school, so yet another couple met in the wards of a mental hospital and many more are attracted by the similarity of their problems or the complementary nature of their emotional needs. These marriages can produce severe stresses which may lead to child neglect, irregular employment and poverty, involving the family with the probation officer, the children's officer, the school attendance officer and with many social workers on whose support they become dependent.

Social pathology and organic disease

It is obvious that the social pathology just described can produce emotional disorders but this group of 187 emotionally disturbed people (145 female and 42 male) also offers an opportunity of assessing the effect of emotional stress in producing organic illness. I have particularly noted the frequency of thyrotoxicosis, alopecia, asthma and duodenal ulcer in their case histories or medical records.

Thyrotoxicosis was suspected at some time in 18 patients but, of these, only seven were accepted as thyrotoxic after investigation. Of these seven, two were treated with radio-iodine, three by thyroidectomy, one with thiouracil and the last received Lugol's iodine. One of the cases treated with radio-iodine has since developed myxoedema.

There is, of course, a problem in differential diagnosis between anxiety state presenting with tachycardia and weight loss, and classical thyrotoxicosis. It is difficult also to decide whether the seven patients developed emotional disorders as a result of thyroid

imbalance or *vice versa* or, indeed, whether the thyrotoxicosis was related to their social histories. Three had been bereaved before the age of five years; three stated that their fathers had been cruel to their mothers; and the other had been sent away from home at the age of two to live with grandparents who were 'lonely'. Emotional factors are well recognized in thyroid disease. Saxena, Crawford and Talbot (1964) found an emotional precipitant in about one-third of their cases of childhood thyrotoxicosis in the Massachusetts General Hospital.

Alopecia was found in 13 women—either as alopecia areata or as a general marked falling out of hair sufficient to bring them to the doctor. Only two of these patients gave a history of childhood bereavement but it was most noticeable that nine of them were in severe emotional conflict with a close relative at the time of the hair loss. In each of these there was also a history of emotional conflict in childhood to which the current conflict was connected or which it had revived. One large survey of alopecia reported a background of significant psychiatric disorder in 22 per cent of the children and 17 per cent of the adults and incriminated acute emotional stress as a precipitating factor in an additional 12 per cent of patients (Muller and Winkelmann 1963).

Asthma or bronchitis had occurred in ten patients of whom only five were serious medical problems. All these reported abnormal interpersonal conflicts. Two had been openly rejected in childhood. Two complained of 'cruel fathers' and one had been divorced from a homosexual husband. Three of the five proved extremely difficult to manage combining a hostile and complaining attitude with attacks of acute asthma.

Duodenal ulcer. Forty-eight of the 187 patients with emotional disorders had complained at some time of epigastric pain. In 25 of these a barium meal had been carried out at least once and, in 14, radiological signs were reported. Twelve of these x-ray reports suggested a duodenal ulcer. One suggested a carcinoma of the stomach but laparotomy revealed hypertrophic gastritis, a gastric ulcer and a duodenal ulcer. One x-ray showed a gastric ulcer but operation, including opening the stomach and detailed examination, had shown no abnormality. This case is therefore excluded.

There are therefore 13 proved cases—12 with duodenal ulcer and one with both gastric and duodenal ulcer. From the point of view of social pathology these 13 cases can be divided into nine bereaved in childhood and four who gave a history of parental discord or rejection in childhood.

With one exception the nine 'bereaved' duodenal ulcer cases had been bereaved at the age of ten years or less and, also with one

exception, each had been the youngest of the family at the time of bereavement. The ulcers in all nine were mild and gave little trouble. Radiologists' reports sounded half-hearted: "Probably indicates small duodenal ulcer" or "I feel there may be a shallow ulcer crater in the duodenal cap" and consultant physicians were equally unconvinced—"I think the latter accounts for his present symptoms" or "although there is an overlay here". The only perforation occurred in the *gastric* ulcer of the patient with both. He also had a haematemesis.

By contrast the four patients with duodenal ulcers and a history of discord or rejection were troublesome and definite. Two of them suffered haematemesis and another presented quite unexpectedly as a perforation. The literature suggests that the link between severity of ulceration and social history may be no accident. Ruesch (1948) contrasted 42 naval, duodenal-ulcer patients with 20 civilian, ulcer patients. Both groups showed a predominance of younger or youngest over eldest children but the naval group more so. The naval group tended to have dominant mothers and uninfluential fathers whereas the civilians had idealized mothers protecting them against punitive fathers. Whereas the naval group had acute or subacute ulcers of which only three bled, the civilians had chronic ulcers of which 30 per cent bled.

Again Kellock (1951) performed a controlled study on hospital patients—presumably severe ulcers—and found that bereavement, family size, birth rank, social class, early separation and educational level were *not* relevant factors! The answer to all this is given by Fry (1964) in his 'Profile of peptic ulcer' when he states that peptic ulcers in general practice are "quite different from those I treated in hospital". He got the impression that they had a characteristic natural history with a marked tendency to natural remissions. Neurosis was three times as frequent in his duodenal ulcer patients as in the rest of his practice.

Patients with emotional disorders can be expected to complain earlier and more frequently of any indigestion they get than would patients of a more stolid disposition. More visits to the doctor must increase the likelihood of a barium meal uncovering part of the 'iceberg' of minor and relatively unimportant ulceration. In this context the predominance of youngest or younger children in my nine 'bereaved' ulcer patients merely reflects a general finding in all patients who lost their parents in childhood, whether or no they later developed duodenal ulcer. Their birth rank has been a factor in making them vulnerable to bereavement rather than in causing the ulcer as table II shows.

TABLE II

BIRTH RANK OF 66 PATIENTS WHO LOST A PARENT IN CHILDHOOD FOUND AMONGST 187 PATIENTS (145 FEMALE, 42 MALE) WITH EMOTIONAL DISORDER

| | <i>Father loss</i> | <i>Mother loss</i> | <i>Total</i> | <i>Ulcer cases</i> |
|------------------------|------------------------|------------------------|--------------|------------------------|
| Eldest or elder | 6 | 2 | 8 | 0 |
| Youngest or younger .. | 19 | 11 | 30 | 7 |
| Penultimate | 6 | 8* | 14* | 1 |
| | | | | (childbirth) |
| Only | 5 | 3 | 8 | 0 |
| Intermediate | 4 | 2 | 6 | 1 |
| TOTALS | 40 | 26 | 66 | 9 |

*Five of these lost their mothers due to death in childbirth and were thus the youngest at the time of the loss.

N.B. Of 17 males who had lost a parent four developed duodenal ulcers.

Of 49 females who had lost a parent five developed duodenal ulcers.

Without attempting to draw firm conclusions from a group of only 13 patients it seems likely that peptic ulcer in the neurotic patient is more often revealed than caused by the neurosis. This is not to deny the existence of a peptic ulcer personality. Goldberg (1958), examining hospital ulcer patients found a pattern of dominant mothers and unassertive fathers, and concluded from 32 male cases that there was a combination of psychological dependence on mothers with deep inward hostility to them. Those without this pattern had a family history of ulceration. My four duodenal ulcer patients with a history of family discord in childhood were more serious cases and conformed to the findings of both Kellock (1951) and Goldberg (1958) in hospital patients, in that bereavement and birth rank were not involved, but three had intense and ambivalent feelings towards their mothers.

We can sum up the effects of social pathology in causing disease by contrasting the psychosomatic disorders largely associated with interpersonal conflicts and especially with abnormal mother-child relationships with the neurotic disorders in which vulnerability to bereavement plays a greater part. Neurosis may pretend to a false association with organic disease by uncovering rather than causing it and also by the well-known tendency to somatize emotional symptoms.

This distinction is underlined by the Royal College of General Practitioners Morbidity Survey where it was noted (Watts 1962) that "psychosomatic disorders, taken together, show an increase of

prevalence as one descends the social scale; a trend completely opposite to the prevalence of psychoneurotic disorders”.

Genetic heredity and its modification by social factors

Social factors not only cause disease, they also modify the operation of genetic heredity. The principal hereditary diseases in general practice are diabetes, epilepsy, thyrotoxicosis, pernicious anaemia and peptic ulcer. In none of these diseases is the method of inheritance clearly established and in some it may be polygenic. There are three main points I wish to make. First, that, in each case, it is the predisposition to the disease and not the disease itself that is genetically transmitted. Secondly, that, because that predisposition can be demonstrated in the relatives of affected patients to a much greater degree than in controls, we ought to be thinking in terms of vulnerable families. Thirdly that environmental and social factors together with age are powerful determinants of whether that sub-clinical disease is expressed as frank illness.

For example, in epilepsy, Lennox and Gibbs (1940) showed that 54 per cent of first degree relatives of epileptics had abnormal EEG's compared with six per cent of controls. It is the predisposition which is inherited. Given that predisposition clinical epilepsy may be triggered off by such things as trauma, tumours, infections and uraemia. There is evidence that emotional strain may start attacks (Serafetinides and Dominian 1963) and age is a powerful factor. Metrakos and Metrakos (1961) believe that the inherited factor is an autosomal dominant gene with low penetrance at birth rising to nearly complete penetrance between $4\frac{1}{2}$ and $16\frac{1}{2}$ years of age and then declining to almost no penetrance after 40 (Hurst 1963, Bray and Wiser 1964).

The same picture is seen in diabetes where 35 per cent of clinically healthy individuals with a family history of diabetes showed an abnormal response to glucose tolerance test compared with four per cent of those without a family history (Taton and Pometta 1964). It is the predisposition to diabetes that is inherited and the likelihood of frank diabetes appearing in these patients not only markedly increases with age but is also modified by diet and their way of life (Seftel and Schultz 1961).

Again in thyrotoxicosis, Ingbar *et al.* (1956) found that nearly one-quarter of 56 clinically euthyroid relatives of 19 patients with Graves' disease had high radio-iodine uptakes and 44 per cent had uptakes significantly greater than normal. In juvenile thyrotoxicosis, in particular, there is a high familial predisposition to thyroid disease (Saxena, Crawford and Talbot 1964). Here again

we can suggest that an abnormality of iodine metabolism is inherited but that frank disease is favoured by increasing age and triggered off in many cases by emotional stress.

Even in pernicious anaemia it has been found, using the Schilling test (McIntyre *et al.* 1959), that about one-fifth of the normal relatives of patients with pernicious anaemia were low vitamin B₁₂ absorbers compared with about one per cent of controls. It is significant that the familial nature of pernicious anaemia is especially marked when onset is in children or young adults but the general incidence of the disease increases with age (Lambert, Prankerd and Smellie 1961).

Lastly, peptic ulcer occurs two to two and a half times more frequently among the living siblings of peptic ulcer patients than it does among comparable controls. This familial incidence could be explained on the basis of social rather than genetic heredity, but here again there is evidence (Doll and Kellock 1951) for the separate inheritance of gastric and duodenal ulcer and the well-known association with blood group and secretor status confirms the genetic association.

However, diet and emotional factors can readily be identified as major precipitants of ulceration in those already predisposed and the effect of age in modifying the penetrance of the genetic predisposition is obvious, the peak incidence for males being in the 30-39 decade, for duodenal ulcer and the 50-59 decade for gastric ulcer (Fry 1964).

Family records

It is fashionable to talk of the iceberg of subclinical disease. It might be more rewarding to think of the patients relatives as being vulnerable, to trace and record that vulnerability in the families of our patients and, at the same time, to record the social factors which convert mere predisposition into actual illness. There have been moves in this direction.

Professor Richard Scott, as long ago as 1950, allotted his families an index number and filed his medical records in a family record folder (Scott 1950) and the St George Health Centre in Bristol has adopted a similar system (Special correspondent 1965). Kuenssberg (1964) has described his 'F' book method of linking and coding disease in families. Such a system is admirable for intensive research but rather cumbersome for routine use. In my own practice I am in the process of introducing a family history register card intended to carry the family's social and genetic background. The card is linked by an index number to individual records and the numbering system allows families to be related to their family of origin to form family trees.

Such a record system at once underlines the fact that whereas many

families, mainly working class, have deep roots in the area, others, mainly middle class, are outsiders and birds of passage—e.g. bank clerks, teachers, local government officers, etc. The first group tend to have more involved family histories, social and genetic, than the second. This fact brings us face to face with the problem of disease and social class.

Disease and social class

The concept of social class springs from two facts. First, that individual families tend to follow the same type of occupation from one generation to the next and, secondly that there is general agreement on arranging those occupations and the families related to them in order of rank. The first fact can be readily explained on the basis of social heredity, being caused, broadly, by the identification children make with their parents' way of life. Cowley became a poet because "in the window of his mother's apartment lay Spencer's *Fairy Queen*". The crux of the matter, however, lies in the criteria we adopt in determining the order of rank.

I suggest that social class is fundamentally determined by the degree of independence and responsibility a family is prepared or expected to adopt in the management of its own affairs. At the top of the scale we find families living in private estates, enjoying private incomes, sending their children to private schools, providing for their own retirement and even employing private doctors. As we descend the scale, the private income gives way to a quarterly or monthly salary and the private doctor to the N.H.S. Then the private school is replaced by the state school and, at a lower level, the private house by the council house. Finally, the private pension is ousted by state benefits and the salary by the weekly wage. Below this level we find families unable to manage their own affairs whatever income they might be given. They subsist alternately on National Assistance and Unemployment benefit and this largely unemployable group merges with those in prisons or mental hospitals who have become so institutionalized that they can accept no responsibility for their own lives and dare not face the outside world. Social class, in short, is a matter of inherited social attitudes, a special case of social heredity.

Against this backcloth it is clear that any handicap, social, physical, financial or educational will cause increased dependence and will tend to make people fall in the social scale carrying their liabilities in genetic or social heredity with them. This implies that differential disease rates as between social classes will be caused, not only by environmental differences, but also by a process of active social selection. Thus, we find that most diseases which affect working capacity—rheumatic heart disease, bronchitis, schizo-

phrenia for example—tend to aggregate at the lower end of the scale. There is evidence too that social selection at marriage results in a concentration of women with a favourable prognosis for successful labour in the upper social groups (Kincaid 1965).

On the other hand, the tendency of neurosis to appear in the upper classes might be attributable to greater independent urges or 'neurotic drive'. Some investigators (Kapp, Rosenbaum and Romano 1947) have found intense independent desires in their peptic ulcer patients and this factor, conflicting with the handicap of the illness may explain the change in social class gradient of this disease.

To stress social selection is not to deny the powerful environmental influences which account for social class gradients of such diseases as tuberculosis, coronary disease or poliomyelitis but merely to emphasize that the greater social mobility arising from increased educational opportunity and affluence may actually widen class differences by causing adverse social and genetic hereditary factors to accumulate in social class V where there will also be selectively less intelligence to cope with them.

We, in general practice, have the task of liberating people who are enslaved by their emotional dependence on others and, in giving them help and support, we must never lose sight of the ultimate aim of encouraging them to throw away their social crutches, stand on their own feet and lead independent lives.

The future of general practice does not depend only on charters and negotiations but, to a much greater extent, on our own willingness to accept the challenge of a fascinating branch of medicine and on our determination to become, in a real sense, personal and family doctors by specializing and participating fully in the lives of the families under our care and by seeking the roots of disease in the pathology of family life.

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A health week in rural general practice. J. J. COPE and D. H. SMITH. *Brit. med. J.* 1967. **2**, 756.

Multiple-screening tests were offered to 4,100 patients in a rural general practice. Over the six-day period, 1,711 patients attended of whom 427 were patients from outside the area attracted by word-of-mouth publicity.

Tests were performed to detect chest diseases, anaemia, glaucoma, cervical carcinoma, carcinoma of the breast, hypertension, glycosuria and albuminuria, together with a simple test of visual acuity.

Two cases of cervical carcinoma were discovered, as were 110 cases of anaemia, two cases of active pulmonary tuberculosis, four diabetics, 43 hypertensives, seven cases of glaucoma and three of urological disease—all previously unknown to their general practitioners.

The main technical snag was the high proportion of false positive urine tests due to either contaminated containers or the oversensitivity of the 'hemacombistix' trace albumin recording.

The authors conclude that the venture was well worth while and justified the time, trouble and expense involved. For any future programme they would like to include rectal examinations of all men over 50—impossible at this time due to lack of a suitable room.