MORTALITY OF MEMBERS OF PARLIAMENT

BY

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In 1966-67 a number of members of Parliament died suddenly. This prompted a two-phase enquiry into any possible excess mortality in this group and into what factors might be responsible. The first part of the enquiry, the results of a postal questionnaire on the health and way of life of M.P.s, has already been published (Wright and Pincherle, 1968). This paper presents the results of the second phase, the mortality experience of M.P.s.

MATERIAL AND METHODS

All persons elected to the House in August 1945 or subsequently were considered for inclusion. Any who did not actually take their seat (by reason of death, resignations, disqualification or elevation to the peerage) were excluded. Included in the study and followed up to the end of 1967 were 1,418 members (male and female), whether they were still sitting members or not. *The Times Guide to the House of Commons* gives a complete list of elected members for all election years and indications of intervening by-elections. Other standard works give the date of death of members or the fact that they were alive at the end of 1966. The obituary columns of *The Times* (who assured us that they always do an obituary on ex-M.P.s) were examined to give the 1967 deaths. Death certificates were obtained for all members who died in the British Isles. These were coded by the staff of the Registrar General according to the rules current at that time.

Certificates were obtained for four of the 12 members who died abroad, and the dates of death for all the rest were confirmed from the consular records. Sufficient information on the remaining eight was obtained from medical attendants, relatives, and press reports to enable a reasonable estimate of the cause of death to be made. The ages of members were usually available in standard reference works, but in some cases members themselves had to be approached for this information. There were no refusals.

The information required for each M.P. was name, age, sex, party, date of election, and fact of survival to 1 January 1968 or date and cause of death. The collection of these data was an arduous task; its complete success was due in part to the good documentation of this group, and in important part to the generous way in which all who were approached gave their time and experience to the search for missing information.

Deaths and elections (except for 1945) were assumed to occur half way through the year. Annual death rates (for England and Wales) were obtained from the Registrar General's reports. Expected deaths were then obtained by multiplying the national rate for a given age/sex group by the years at risk for that year. Similar methods were used for the individual causes of death. The 1967 results were not then available, so the rates were assumed to be the same as for 1966. As 246 out of the 296 (83%) male deaths occurred in members elected in 1945 (46% of the male total), some of the analysis has been restricted to this group.

Throughout the paper significance has been estimated by the χ^2 test using Yate's continuity correction with one degree of freedom. The contribution of survivors has been omitted and this introduces a small error which tends to minimize the significance of the results.

RESULTS

OVERALL MORTALITY

Included in the study were 1,364 male M.P.s, and over the period of the investigation their ages ranged from the twenties to the nineties. The follow-up period comprised nearly 19,000 man-years at risk. In all there were 296 deaths, with an expected number of 467.3 ($\chi^2 = 62.4$; $P < 0.0001$). Figure 1 shows the cumulative totals for actual and expected deaths at the end of each calendar year. Table I shows that this difference is present in all age groups.

If only the men elected in 1945 are considered, 246 deaths occurred and 375.3 were expected ($P < 0.0001$). The usual way of calculating expected

FIG. 1. Male members of Parliament elected 1945-67. Cumulated totals at end of year.
FIG. 2. Male members of Parliament elected in 1945. Cumulated totals at end of year.

deaths is to multiply the age specific death rates by the years at risk. An alternative method, particularly applicable when a fairly long period is being considered (in this case 22.4 years), is to calculate the deaths that would have occurred in a theoretical population of the same age structure as the index population which exactly followed the death rates of the nation as a whole. When this cohort method is used a different figure is obtained. Figure 2 shows how the cumulative totals of the two methods differ from each other and from the actual number of deaths. Theoretical considerations show that in a population with a mortality experience consistently different from the national, the 'cohort' curve will be closer to the actual number of deaths than the usual curve. However, the difference between the

TABLE I
MALE MEMBERS OF PARLIAMENT 1945-67, DEATHS BY AGE

Age at Death	Total Man-years at Risk	Expected Deaths	Deaths
25-34	636	0.97	0
35-44	3,473	9.5	6
45-54	5,626	43.4	30
55-64	5,265	116.1	82†
65-74	2,731	147.8	104‡
75-84	963	118.4	61‡
85+	124	31.1	13‡
Total	18,818	467.3	296‡

† $P < 0.005$ ‡ $P < 0.0005$

TABLE II
MALE MEMBERS OF PARLIAMENT ELECTED IN 1945: MORTALITY BY AGE GROUPS ON ENTERING THE STUDY

Age in 1945	Age in 1967	No.	Actual Deaths	Theoretical Deaths	χ^2
25-34	47-56	57	2	14.7	13.6†
35-44	57-66	171	29	46.0	8.1†
45-54	67-76	167	67	72.6	0.6
55-64	77-86	165	102	126.0	18.6‡
65 or over	87 or over	56	46	55.0	77.2‡
Total		616	246	314.4	29.9‡

In calculating the χ^2 value, the contribution of survivors is relevant and has been included: † $P < 0.005$; ‡ $P < 0.0005$.

The theoretical deaths are based on the 'cohort' method of calculation—see text.

actual number of deaths (246) and the expected number calculated in this way (314.4) is still highly significant ($P < 0.0005$), and the difference between actual and expected deaths is also significant at all ages, except for those 45-54 in 1945 (Table II).

INDIVIDUAL CAUSES OF DEATH

CORONARY THROMBOSIS. There were 81 coronary deaths (I.C.D. 420) but 97.2 were expected. This gives a mortality ratio of 83% compared to one of 63% for all deaths. In the younger members (under 55) the deaths were very nearly equal to the expected (Table III).

STROKES AND OTHER CARDIOVASCULAR DISEASE. (I.C.D. 330-334 and 400-468 except 420). These conditions were responsible for 68 deaths, whereas 135 would have been expected, giving a mortality ratio of 50%. Only two of these 68 died under the age of 55 years.

CANCER. Fifty-four deaths occurred from malignant neoplasms (I.C.D. 140-205). The expected number was 94.6, giving a mortality ratio of 57%. In those under 55 the ratio was 30% with only four deaths.

ACCIDENTS, SUICIDE, ETC. Trauma (I.C.D. E 800-999) was responsible for 24 deaths. The ex-

TABLE III
MALE MEMBERS OF PARLIAMENT 1945-67: DEATHS FROM
VARIOUS CAUSES

Cause	Age	Observed Deaths	Expected Deaths	Expected Deaths × Overall Mortality Ratio
All causes	All ages	296	467.3†	—
	Under 55	36	53.9*	—
Cancer (I.C.D. 140-205)	All ages	54	94.6†	59.6
	Under 55	4	13.4*	8.9
Coronary thrombosis (I.C.D. 420)	All ages	81	97.2	61.6*
	Under 55	11	11.6	7.7
Strokes and other C.V. (I.C.D. 330-334 + 400-468 except 420)	All ages	68	135.0†	85.0*
	Under 55	2	8.0	5.3
All violence (I.C.D. E 800-999)	All ages	24	15.5*	9.8†
	Under 55	10	5.0*	3.34†
All other causes	All ages	69	125.0†	79.2
	Under 55	9	15.9	10.6

*P < 0.05 †P < 0.0005

Note: The last column represents the deaths from a particular cause that would have occurred if the observed deaths had been distributed in the same way as the national figures. In calculating the significance of the figures in this column the contribution of the other deaths has been considered.

pected number of deaths was 15.5, and the increased mortality is statistically significant ($P < 0.05$). For those under 55 the mortality was twice the expected (Table III), and this figure is also statistically significant ($P < 0.05$). Suicide accounted for five of these deaths (expected 4.7). Three were under 55 (expected 1.7). There were two other deaths due to overdoses that were stated to be accidental (both were under 55). Nine died in traffic accidents, three of whom were under 55. No one was murdered.

WOMEN MEMBERS

Fifty-four women were elected in this period.

TABLE IV
MALE MEMBERS OF PARLIAMENT ELECTED IN 1945: MORTALITY FROM DIFFERENT CAUSES BY PARTY, ALL AGES

Cause	Labour			Non-Labour		
	No. of Deaths	Mortality Ratio	Ratio of Mortality Ratios**	No. of Deaths	Mortality Ratio	Ratio of Mortality Ratios**
All causes	165	0.71†	—	81	0.57†	—
Coronary thrombosis (I.C.D. 420)	50	1.08	1.54†	13	0.46†	0.81
Other cardiovascular (I.C.D. 330-334 and 400-468 except 420)	38	0.52†	0.74	31	0.71	1.23
Cancer (I.C.D. 140-209)	33	0.73	1.04	16	0.59*	1.03
Trauma (I.C.D. E 800-999)	11	1.67	2.37†	5	1.16	2.03
All other causes	33	0.53†	0.75	16	0.42†	0.75

**The 'ratio of ratios' represents the number of deaths due to a given cause divided by the number that would have occurred if the mortality ratio for the whole sub-group had applied to that particular cause. Significance has been calculated as χ^2 on this basis. *P < 0.05; †P < 0.01; ‡P < 0.001.

There were 10 deaths (expected 12.0), four from cancer and three from cardiovascular disease (including strokes). The numbers are too small for further analysis to be meaningful.

PARTY DIFFERENCES

To avoid complications these have only been considered in men elected in 1945 and in two groups—the Labour majority party in 1945 and the others. Table IV summarizes the results. There did not appear to be any difference in the behaviour of different age groups but the numbers are too small to be certain. The mean ages of the two groups are Labour 50.8 years, non-Labour 48.7 years ($P < 0.05$). The overall death rates from various causes are similar to those for the whole group in Table III.

The difference in mortality rates for all causes is not significant. However, the difference in coronary thrombosis death rates is significant ($P < 0.01$). The Labour members' mortality from this cause is very close to the national average, but it contributes a significantly higher proportion of the total number of deaths. The non-Labour members, on the other hand, have a significantly lower mortality than the national average, but the proportion due to coronary thrombosis is not significantly less than expected (Table IV). There are no other significant differences between the parties.

DISCUSSION

Little has been published on the life expectancy of legislators or rulers. A study of America's presidents, vice-presidents, and presidential candidates (Statistical Bulletin, Metropolitan Life Insurance Co., 1967) showed that they had a lower life expectancy than the population as a whole. This was true even if assassinated presidents were excluded and was more evident after Lincoln (1860) when politics became more strenuous. However, a

further study on men in the United States of America *Who's Who* showed that these prominent men had a 70% mortality compared with other white males (Statistical Bulletin, Metropolitan Life Insurance Co., 1968), which is comparable to the 63% mortality in this study.

It is unlikely that a person who was ill would present himself for election to the House and this may be part of the explanation for the better prognoses of M.P.s. However, if we consider only those members elected in 1945, the difference between expected and observed deaths in the first five years, when the effect of this selection would be maximal, was 28.4: in the latest five years, by which time the effect would be negligible, the difference was 39.6. This difference over only a quarter of the period at risk was still significant ($P < 0.0005$). The effect of selection therefore cannot account for the results. It is also possible that a very small number of deaths, particularly in 1967, were not noted. Even if 20 deaths had been missed, which is at least five times any realistic estimate of this error, the statistical significance of the results would not be affected.

Among the individual causes of death, the most striking finding is the high contribution of trauma. This is the only group of causes where deaths were significantly higher than in the population as a whole. The excess of road traffic accidents (9 occurred, approximately 4 expected, $P < 0.025$), may perhaps be related to the fact that 50% of M.P.s drive 10,000 miles a year or more (Wright and Pincherle, 1968).

Other cardiovascular disease and cancer showed about the same mortality ratio as all causes, deaths being very significantly less than expected. Coronary thrombosis showed no significant advantage to members, particularly the younger ones. The difference between the ratio of coronary deaths to total deaths, 0.273, was significantly higher than that for expected deaths, 0.208 ($P < 0.01$).

From the results of the questionnaire to members (Wright and Pincherle, 1968) it is possible to compare members with other groups for some of the factors known to predispose to coronary thrombosis. Thus they smoke less, and have about the same degree of overweight as businessmen (Pincherle and Wright, 1967), who, in turn, smoke less than the average English male (Todd, 1966). They tend to be sedentary, apart from walking about the corridors of the House. They are subjected to an apparently highly stressful environment, working long hours, often with inadequate sleep, and taking short or moderate holidays. Half the non-ministers have an outside activity of importance.

In the way of life of the average member there is little to account for his favourable mortality. It is likely that this is due to a process of selection. The sort of person who works towards becoming a successful M.P. must not only tolerate the stresses but must thrive on them. This selection will be in three stages. First, self selection—the sort of person who wishes to become a member will usually be the sort of person who will enjoy the life. Secondly, external selection by party and constituency machines and electorate; and, finally, selection by the actual environment—if the life is not congenial a member can readily resign or not present himself for re-election. Those who survive this weeding out will be specially able to cope with the strains of parliamentary life; to them, indeed, they may be a pleasure, or even a necessity, rather than a strain.

The differences between the Labour and other party members provide food for speculation. It has been shown (Hinkle, Benjamin, Christenson, and Ullmann, 1966) that university graduates are less prone to coronary thrombosis than non-graduates: only 45% of Labour members have a degree or professional qualification compared to 74% of Conservatives (Wright and Pincherle, 1968). The stresses associated with working-class origins and, perhaps, with 13 years in opposition may also have played their part. It is also possible that the result is due to some form of selective diagnosis in doubtful cases. Labour members might perhaps tend to be diagnosed as having coronary thrombosis (I.C.D. 420), while other party members might be diagnosed as having, say, degenerative heart disease (I.C.D. 422). There does not seem to be any reason for such a systematic difference, but the low incidence of 'other cardiovascular disease' in Labour members would fit this suggestion. If all cardiovascular disease is combined, there is then no significant party difference.

SUMMARY

The mortality of members of Parliament from 1945 to 1967 is compared with the national figures. Members in general fared much better than the population as a whole, only 63 dying for every hundred who would have been expected to die. However, there was no benefit so far as coronary thrombosis was concerned and a definitely increased risk of death from trauma. Although Labour Party members showed an insignificantly higher overall mortality than non-Labour, their mortality from coronary thrombosis was significantly higher. The factors that may relate to this mortality experience are discussed.

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