THE PROGNOSIS, MANAGEMENT AND DISPOSAL OF THE SERVICE PATIENT

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Primary prevention is considered briefly. The Army has no programme of planned screening; perhaps it should. There is much to be said for the regular measurement of blood pressure, particularly amongst older people for whom also more should be done to stop smoking. Beta-blockers have changed the treatment of hypertension and there is a certain amount of soft evidence that they prevent coronary heart disease. Obesity and physical fitness are battles which you win once the patient has had his first myocardial infarct, not before.

The problem for the Service physician is often that of a man aged 40, a thrusting major or warrant officer about to be commissioned, who has had a myocardial infarct. It is uncomplicated and he makes a complete recovery. A few years ago we were being counselled in such cases to proceed to coronary arteriography at about six weeks. Logistic problems precluded this course of action and the present plan is for an exercise test at about three months using a bicycle (now treadmill) and a 12-lead electro-cardiogram during various stages of exercise. Towards the end of the exercise a thallium scan is undertaken to determine myocardial perfusion. A poor result or marked changes in the ECG during exercise are then reasons for coronary arteriography and for deciding if there might perhaps be benefit from cardiac surgery.

The surgical procedure at present advocated is the coronary artery bypass operation. Such operations have been successfully conducted for at least the past six years in this country and it is now possible to assess the results. The myocardium revascularizes well and the patient gets relief from his symptoms. Unfortunately there is no evidence that the operation prevents premature death or that it prevents further cardiovascular incidents. There is no doubt that it does improve the quality of life. It is remarkably effective at relieving symptoms.

Medical treatment is disappointing. Present practice is to administer no medication except possibly beta-blockers. As far as categorization and assessment are concerned the usual recommendation is Pulheems category P7 for one year and P3 thereafter but never P2 unless the case is a quite exceptional one.

CORONARY HEART DISEASE IN THE CIVIL SERVICE

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Applying England and Wales' age specific death rates to the 260,000 male and 220,000 female non-industrial civil servants in post on 1 January 1978, 1903 deaths from all causes would have been expected in the men during 1978, with over a third of them due to ischaemic heart disease (Table VIII). One hundred and twelve women could also have been expected to die of ischaemic heart disease in 1978. There are wide grade differences in deaths from coronary

Table VIII
Expected deaths (male) 1978

Age (years)	Men in civil service	All deaths	Ischaemic heart disease
Under 30	68,460	61	4
30—44	71,099	159	44
45 and over	123,754	1683	620
Totals	263,313	1903	668

heart disease in the civil service, with messengers running four times the risk of administrators, clerical workers three times and executive officers twice⁴. These grade differences still persist when differences in smoking habits, blood pressure, blood glucose and blood cholesterol levels are taken into account. However, in spite of these figures, life expectancy in the civil service is high, male executive officers, for example, being in the top 20 per cent of 223 occupation units in length of life expected (Table IX)⁵. This may be partly due to the low rates of smoking in the civil service (Table X). Studies in the civil service by Professor Rose and his colleagues⁶ and Professor Morris and others⁷ have shown the effects of smoking, raised blood sugar, raised blood glucose and cholesterol and of lack

Table IX
Abridged occupational life tables⁵

Occupation unit		Expectation of life in years at	
		15	45
097	Bricklayers, labourers	46.5	21.3
221	Armed forces (UK)	50.4	22.0
008	Coal miners	52.7	25.0
	All men	55.6	27.4
214	Judges, barristers	56.7	27.8
142	Civil service executive officers	57.4	28.2
191	Medical workers n.e.c.	57.0	28.8
174	Local authority senior officers	58.7	29.4

Table X
Smoking civil servants (1975)

	Men (percentage)	Women (percentage)
Manufactured cigarettes (with or without other products)	20	34
Other products	14	1
Total	34 (Public 61%)	35 (Public 47%)
Ex smokers	29	16
Never smokers	37	49
Total	100	100

of vigorous exercise on the probability of dying from coronary heart disease, and for several years the Civil Service Department Medical Advisory Service has been attempting to put into practice the lessons learnt from them. In a large scale screening exercise starting in 1975 a target population of 100,000 London based civil servants aged 35 and over was asked to complete questionnaires detailing symptoms of cardiovascular, respiratory and gastro-intestinal disease together with medical and family history and tobacco and alcohol consumption. Those identified as being at risk are asked to undergo examination including electrocardiogram, chest X-ray, blood pressure, height, weight, wide biochemical screen and Vitalograph. One major drawback has been the low response rate in the grades where morbidity is concentrated. Only 30 per cent of messengers respond compared to 90 per cent of executive officers and above. The findings so far support those of the South East London Screening Survey⁸ where mortality and morbidity in a screened population followed up for several years have been found to be no better than in a control unscreened group. We believe now also that the detection of hypertension should only be carried out in settings in which adequate therapy and long term follow-up observation can be arranged⁹. For these reasons the London Survey has been halted meantime.

In the health education field we have been pointing out to cigarette smokers any impairment of the Vitalograph with the offer of repeating it and demonstrating its return to normal after a prescribed period without cigarettes. This is undoubtedly effective, though the first such study of this technique in the civil service¹⁰ has not yet shown any difference in mortality in the intervention group. It may be that the main thrust of medical education has to start much earlier.

The most effective way of altering attitudes and behaviour in a hierarchical organization may be the lobbying of senior members of the organization. Professor McDermott in his 1978 Hunterian Lecture at the Royal College of Surgeons showed how seat belt legislation was procured by the concerted lobbying of politicians by the medical profession in Australia. Preventive measures may be best effected through the people who decide what the smoking policy for an organization is going to be, or how much resources are to be devoted to providing facilities for exercise, or decide the contents of canteen food.

RESEARCH IN SUPPORT OF PREVENTION

LT COL A G HARWOOD, MB, MFCM, RAMC

The Army Occupational Health Research Unit (AOHRU) is part of the Applied Physiology Division of the Army Personnel Research Establishment. The Unit's contribution to this field of study is therefore largely concerned with clinical and physiological measurements of a relatively fit and predominantly young occupational group. Whilst relatively ready access to subjects is a favourable feature of Army research in IHD related factors, two important constraints determine the type of study which we can undertake. These are the relatively