

Evaluation of the RCGP report on the prevention of arterial disease

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SUMMARY. For this pilot study 349 patients aged between 20 and 64 years were seen following their consultations with their own general practitioners. The recommendations of the recent RCGP report on the prevention of arterial disease in general practice were carried out. An average of seven minutes was spent with each patient. A considerable number of patients had risk factors for arterial disease; 25 per cent of the sample were smokers, 32 per cent were obese and 15 per cent had a single blood pressure reading greater than 150/90. Two new cases of diabetes were discovered.

Case-finding for risk factors for arterial disease, as recommended in the RCGP report, was considered worthwhile but might be most effectively carried out by a suitably trained practice nurse.

Introduction

THE RCGP report (1981) on "Prevention of arterial disease in general practice" made several recommendations. The four main recommendations were:

1. Control of known hypertensives with a diastolic threshold above 104 mmHg, by planned follow-up and active recall.
2. Case finding of new hypertensives under 65 years of age.
3. Control of known diabetics in respect of blood glucose, obesity, smoking and hypertension.
4. Control of cigarette smoking by an active case-finding approach throughout the practice population.

Other recommendations, considered less important by the sub-committee of the RCGP Working Party on

Prevention, were mentioned within the text of the report, although not included in the summary. These can be listed as follows:

1. Checking the blood pressure of women on oral contraceptives at least twice yearly.
2. Measuring either fasting blood sugar or post-prandial glycosuria in obese patients and in patients who have been taking thiazide diuretics for more than three years.
3. Measuring the height and weight of patients under 65 years who look fat, and giving them dietary advice and a target weight (for example, 'ideal weight' plus 10 per cent to aim for).
4. Measuring fasting blood lipids in first degree relatives of people developing coronary artery disease under the age of 50 years, and in smokers who are also hypertensive and have a family history of coronary artery disease.
5. Reducing the dietary fat intake of diabetics and carrying out annual funduscopy under dilatation.

Our evaluation of the report was in three parts:

1. Examination of the patients' records to see how many of the RCGP recommendations were already being carried out by our practice (with a fairly 'average' commitment to preventive medicine).
2. Completion of a questionnaire by patients to determine both factual information (for example, smoking habits) and attitudes to preventive medicine.
3. Seeing the patients after their consultation with their own doctor and carrying out the above recommendations.

Aims

The aims of the pilot study were: to evaluate the RCGP report in terms of time needed to carry out their

recommendations, extra facilities required, and acceptability to patients; to establish how many of the recommendations were already being carried out by our practice, and to determine how many of our patients had risk factors for arterial disease.

Method

During the study period, at the beginning of each day, all the notes of patients with appointments for ordinary surgeries (not antenatal, diabetic, etc.) were seen by one of us (NW). Those in the age range of 20–64 years were noted. These patients were asked by the receptionists, when they booked-in for their appointments, if they would be prepared to complete a questionnaire and follow their own general practitioner's consultation with an interview by NW. During the study period, NW was involved exclusively in this research work. Where there were too many patients within the right age range for all to be seen, a number were randomly included. The names of those not so included were noted in order to act as controls in any follow-up studies.

The questionnaire asked for factual information—name, age, smoking habits, etc.—as well as enquiring about patients' attitudes to and knowledge of preventive medicine. Some questions had analogue scales on which patients could grade their answers.

On completion of the questionnaires the patients were seen by NW and thanked for helping with the study, which was briefly explained. The recommendations summarized in the introduction were then carried out and the time taken was noted. Those patients who were found to be overweight, smokers or those who took no exercise were given advice and handed a relevant Health Educational Council booklet. Those who had a blood pressure measurement greater than 150/90 were referred back to their general practitioners. The names of patients found to have a raised fasting blood sugar or abnormal level of blood lipids were given to their own doctors for follow-up.

The records of these patients seen by NW were also examined to see how many of the RCGP recommendations were already being carried out by our practice.

Results

Three hundred and forty-nine patients were seen, 248 women (71 per cent of total) and 101 men (29 per cent), between the ages of 20 and 64 years. The age groups are shown in Table 1.

The average time each patient spent with NW was 7 minutes (range 2–22 min).

Eighty-four per cent of patients asked to take part in the study, agreed to do so.

Smoking

Eighty-six patients (25 per cent) were current smokers. There were 94 ex-smokers. The average time the ex-smokers had given up smoking was 11 years (range 1 day to 40 years!). Nine (10 per cent) had given up smoking less than one year, and 55 (59 per cent) had given up 10 years or less. From the above figures it can

Table 1. Age ranges of the 349 patients.

Age (years)	Number of patients	Percentage of total
20–29	121	35
30–39	82	23
40–49	60	17
50–59	63	18
60–64	23	7

Table 2. Diseases which patients named as being caused by smoking.

Disease	Number of times mentioned	Percentage of sample
Lung cancer	313	90
Chronic bronchitis	145	41
Heart disease	123	35
Atherosclerosis	21	6
Raised blood pressure	9	3
Other cancers (eg. mouth, oesophagus)	9	3
Worsening of peptic ulcer	2	—
Increased tendency to thrombosis	1	—
Damage to fetus (not mentioned by any men)	9	4 (of women)

be seen that 169 patients (48 per cent of our sample) had never smoked. Only 19 (5 per cent) of our patients had their smoking habits recorded in the notes (15 per cent of the smokers but only 2 per cent of the non-smokers).

In the questionnaire, ex-smokers were asked their reason for giving up smoking. Fifty-eight (62 per cent) mentioned health; 16 (17 per cent) gave expense; nine patients (10 per cent) gave both these reasons. Pregnancy was mentioned by seven women (11 per cent of the female ex-smokers). One third gave no reasons.

Patients were also asked in the questionnaire to name any diseases they thought were caused by smoking. Twenty-one patients (6 per cent) did not name any diseases. The average number of diseases mentioned correctly per patient was 1.8 (Table 2).

Obesity

Using the table given in the RCGP report (1981), patients were considered to be obese if their weight was greater than 'ideal weight' plus 10 per cent. One hundred and ten patients (32 per cent) were over this weight (34 per cent of men, 30 per cent of women).

Twenty-five patients (7 per cent) were both obese and smokers. There was no correlation, either negatively or positively, between obesity and smoking.

Blood pressure

Two hundred and seventeen patients (62 per cent) had had their blood pressure recorded in the notes within the last five years (50 per cent of men and 67 per cent of women). Of these, 45 (21 per cent) had blood pressures greater than 160/100. Appropriate action (follow-up or treatment) was taken for only 22 (49 per cent) of these patients. Out of the 23 patients (51 per cent) for whom no action was taken, 12 (52 per cent) still had a blood pressure measurement greater than 160/100 when seen by NW. Four (17 per cent) had blood pressures between 150/90 and 160/100, and two (8 per cent) had normal blood pressure when seen by NW.

Out of all the blood pressures taken by NW, 24 patients (7 per cent) had a blood pressure measurement greater than 160/100 (9 per cent of men and 6 per cent of women). Twenty-eight patients (8 per cent) had blood pressures between 150/90 and 160/100.

Eighteen patients out of the entire sample (5 per cent) were known to have raised blood pressure and were on treatment.

Blood sugars

Altogether, there were 85 tests for fasting blood sugars (25 per cent of patients). These were requested either because the patient was obese or because the patient had been on thiazide diuretics for more than three years. Only 52 (61 per cent) of the patients came back to have their blood taken. Of these, two (4 per cent of samples taken) were abnormal. We therefore discovered two new cases of diabetes. Three patients were known to be diabetic. Thus, the total number of diabetics in our sample was five (1.4 per cent).

None of the 12 patients (3 per cent of our sample) who had been on thiazide diuretics for more than three years had an abnormal level of fasting blood sugar.

Blood lipids

Seventeen measurements of blood lipids were requested for all of these patients because of a history of coronary artery disease in a first degree relative under 50 years old. Ten (59 per cent) of the patients came back to have the blood taken and, of these samples, two (20 per cent) were abnormal.

Exercise

Only 23 per cent of our patients took regular exercise (which we defined as exercise carried out for at least 20 minutes twice weekly and which produced an increase in heart rate).

Patients were extremely enthusiastic about being screened for risk factors and discussing preventive medicine. Many patients wanted their spouses to be 'checked' and were disappointed to be told that the

spouses were not eligible for the study. After our study was completed, several patients asked if we would be running a health clinic in future.

Discussion

If general practitioners are to achieve a significant reduction in cardiovascular deaths within Great Britain, it will be necessary for the majority to carry out most of the recommendations of the RCGP report (1981). These checks therefore need to be simple, speedy and easy for patients. In our study we tried to assess these factors. Although the number of patients seen was small, we felt our results could be applied to other practices.

Our practice is situated in a mainly residential area of a university town and has a relatively high proportion of academics, and also students both foreign and British. This probably means that our patients are better informed and more health conscious than the average person.

All the recommendations in the RCGP report were carried out and found to take an average of only 7 minutes per patient. The implications of this for our practice would be that each principal would need to spend an extra 15 minutes per morning or evening surgery during the first year, after which period the time would drop to an extra 5 minutes per surgery. If only the four main recommendations in the summary were to be carried out, the time needed would be less. We found that a sizeable proportion of our patients had risk factors for arterial disease.

Two of the four main recommendations of the RCGP report are the case-finding of smokers and hypertensives. However, unless smokers can be persuaded to stop smoking and patients with raised blood pressure are treated appropriately, there is little point in establishing which patients are at risk. Other studies have shown that doctors can help smokers to stop (Russell *et al.*, 1979). Unfortunately the management, both in hospital and general practice, of patients with raised blood pressure has been shown to be unsatisfactory (Parkin *et al.*, 1979; Beilin *et al.*, 1980). In our practice we found that half the patients with high blood pressure were not followed up, and of the patients on hypotensive agents one third were poorly controlled. Thus, if the first recommendation is to be carried out successfully, patients with high blood pressure will need to be more carefully managed than has generally been the case. The remaining main recommendation is the control of known diabetics by the general practitioner. There are many general practitioners who feel uneasy in managing diabetics and who would prefer them to be followed up by a hospital clinic. However, diabetics should be checked regularly somewhere, and it has been shown that a significant percentage of cases are not followed up by general practitioners or hospitals (Doney, 1976).

Turning to the minor recommendations in the report, the following points emerged from our study. First, we

found that it was time-consuming and ineffective to screen all overweight patients for diabetes and this should be restricted to overweight patients over 50 years of age. It might have been more rewarding to screen only those in excess of ideal weight plus 20 per cent, rather than plus 10 per cent, as in this study. Also, the method of screening proved cumbersome, as the patient had to return either for a fasting blood sugar estimation or with a specimen of post-prandial urine. Our compliance rate for patients returning for blood tests was only 61 per cent. Random urine samples can be difficult to produce; the most efficient approach to a blood sugar test would be a random blood sample taken during the consultation, preferably by fingerprick and using a glucose meter for reading the result. Urine samples are also more likely to give false positive or false negative results than blood samples.

In the detection and management of hypertension, no mention is made in the RCGP report of the role of both dietary salt and alcohol consumption in the aetiology and treatment of hypertension. There is also no mention of the need to check regularly the blood pressure of women on hormone replacement therapy, although the need to check those on the contraceptive pill was mentioned.

The criteria for blood lipids estimation should be extended to include patients with xanthelasma and a premature arcus senilis; and to diabetics.

In conclusion, the recommendations in the RCGP report on the prevention of arterial disease were commendable and easily implemented. They could be carried out by a suitably trained nurse if the general practitioner felt he did not have the time to spend on preventive medicine. The appointment of part-time 'preventive-health' nurses should be made by more practices, considering that 70 per cent of their income is recovered from family practitioner committees. In this way a reduction in cardiovascular morbidity and mortality could be achieved in the next generation of patients.

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Benefits of a normal coronary angiogram

In 72 consecutive cases of severe angina or intractable atypical chest pain where coronary arteries were normal, the patient's clinical status and use of hospital facilities were assessed for the two years before and two years after angiography. Functional improvement was observed in most of the patients and half had no functional limitation after the procedure. The use of hospital facilities decreased significantly after the cardiac catheterization.

The authors suggest that these therapeutic and economic benefits deserve consideration when assessing the overall effectiveness of coronary angiography.

- Source: Faxon, D. P., McCabe, C. H., Kreigel, D. E. *et al.* (1982). Therapeutic and economic value of a normal coronary angiogram. *American Journal of Medicine*, **73**, 500-505.

Formaldehyde in cigarette smoke

Concentrations of the irritants formaldehyde and acrolein in side-stream cigarette smoke plumes are three orders of magnitude above occupational limits, readily accounting for eye and nasal irritation. Low tar cigarettes appear to be at least as irritating as other cigarettes. The possibility is raised whether formaldehyde in smoke is associated with bronchial cancer.

- Source: Ayer, H. E. & Yeager, D. W. (1982). Irritants in cigarette smoke plumes. *American Journal of Public Health*, **72**, 1283-1285.