THE CANCER PROBLEM*

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IT IS a disturbing reflection that each year brings 100,000 deaths from cancer and 150,000 new cases in the United Kingdom. Cancer cannot be regarded as only a disease of senior citizens when almost half of all cancer deaths are in people under 65 years. Furthermore, cancer is the leading cause of death in women of the 30 to 50 age group. New techniques of diagnosis and treatment have yet to justify themselves in regard to mortality rate which is, in general, much as it was 20 years ago.

Professional education

Two thousand years ago Celsus wrote, “Only the beginnings of a cancer permit a cure” and yet most of us have not yet disabused our minds of the traditional image of cancer—which must now be regarded as the image of late or terminal cancer. The prognosis of cancer will never improve as long as we think of the malignant tumour in terms of a shadow in a chest radiograph or a mass in the abdomen or a palpable lesion of the cervix. We should begin to educate medical students and re-educate doctors to think in terms of cancer detection—that is to say the discovery of asymptomatic disease, as opposed to cancer diagnosis—which is the interpretation of existing symptoms and signs.

Public education

The British public desperately needs leadership from the profession, publicizing, for example, the necessity and availability of cervical cytology. The habit of self-examination of the breasts should be fostered and positive advice given in the preservation of health by emphasizing the harm caused by cigarettes. Furthermore, it should be made clear that cancer is not a dirty word and in the early stage is highly curable. Additionally, the seven danger signals of the American Cancer Society—which are in general the pronouncements of the late Mr Sampson Handley of London, could be exploited with profit (table I).

*Being the Pfizer lecture to the North-east Scotland Faculty on 13 June 1967 at University Medical Buildings, Foresterhill, Aberdeen.

The consequences of education

Can we assess the effect on the National Health Service of an increasingly well-informed public opinion? Community doctors are already aware of the significant increase in the numbers of patients asking for ‘a check up’ or ‘an overhaul’. We may anticipate

TABLE I
THE SEVEN DANGER SIGNALS

| 1. Unusual bleeding or discharge. |
| 2. A lump or thickening in the breast or elsewhere. |
| 3. A sore that does not heal. |
| 4. Change in bowel or bladder habits. |
| 5. Hoarseness or cough. |
| 6. Indigestion or difficulty in swallowing. |
| 7. Change in a wart or a mole. |

Go to your doctor if the signal lasts longer than two weeks

pressure to provide screening clinics, at great expense, in the near future and we must be wary in case we become hoist with our own educational petard. Cancer is a word which promotes revivalist feelings in many people; it provides instant platform for politicians and produces tunnel-vision in some doctors. There are other things in medicine with less glamour but as much importance. Cancer is a worthy adversary but there is a limit to the finance, time and expertise available to combat it.

Detection centres

To meet the demand and need for detection and earlier diagnosis there is a specious appeal in the creation of specialized detection centres. However, experience in the U.S.A. has shown that such institutions are poor investments from the point of view of economy, patient-attendance or yield of positive results. The recurrent routine physical examinations prove destructively monotonous and the concept of the ‘battery-hen’ physician is unappealing. Much of Britain is rural or semirural and scattered detection centres will give a poor service in such circumstances. Additionally, there are potential communication difficulties with local medical practitioners who are, after all, the doctors who will cope with any morbidity discovered.

The general practitioner’s role

The unique pastoral system of British general practice provides the ideal framework for a method of disease detection. Nevertheless each family doctor is only capable of so much amoeboid division and our all-embracing concept of patient care has caused domestic medicine to perish in Britain. No longer does your mother care
for your boils, diagnose your chickenpox, treat your headaches or let you shrive yourself when your transgressions, temptations and tensions are no longer tolerable. This situation is adverse because initiative and independence are discouraged by a system which does not also discourage the development of neurosis. But it is also a favourable situation because we should welcome minor symptoms, even in neurotics, as the portents of early disease and the proponents of early diagnosis.

Annual health appraisal

As parish doctors, or pastoral doctors, we have the benefit of a ‘captive population’ whom we know and can locate. No other country in the world has such an advantage, opportunity and responsibility to relate detection and early diagnosis to the individual citizen. Time is never on the side of the British practitioner and he may not be able to do much practical disease detection, but he should be in control, heading the Health Appraisal Team in the community which will provide a type of annual health examination. Each team is envisaged as consisting of three people—the general practitioner on whose list the patients are, a secretary who will attend to organization and paper work and a nursing sister who will act as educator, teaching women such things as breast self-examination and the need to have a cervical smear. This nursing sister will also act as an investigator, interviewing each patient in the practice each year, identifying the high-risk groups by asking stipulated routine questions (see Appendix). She will also act as a technician carrying out such examinations as blood pressure, haemoglobin estimation, urine examination, annual breast examination. The taking of cervical smears and even abdominal and pelvic examinations could so easily come within her compass. Here then is the concept of a new modality in community care—a nursing sister educated horizontally through her basic training and vertically by the doctor with whom she works. Furthermore, this nurse will, I hope, agree to take from her doctor certain things which he may wish to slough off, such as repeat dressings, plantar warts, boils, minor injuries, vaccinations and even social problems, chronic sickness and terminal illness—in part if not in whole. The doctor will now be free to use his special skills to maximum purpose, knowing full well that today’s hospital problem will belong to tomorrow’s general practice and that his burden of ability and knowledge can only increase.

No one can deny such an annual health encounter is just as reasonable and probably more necessary than the annual dental examination which most of us nowadays insist on.

The ambit of screening

The mass screening of patients by the undiscerning use of batteries
of tests is distasteful. But what is the radius of screening to be? Cardiologists advise electrocardiographs; radiologists, radiographs; clinical chemists, liver function tests; gastroenterologists, routine sigmoidoscopy and chest physicians say that tests of respiratory function are mandatory. In the ultimate, each apparently healthy person might spend two or three days each year under intensive and expensive scrutiny. We should be careful not to direct much of the National Health budget towards esoteric and exotic examinations of the asymptomatic person. Such examinations bring a significant volume of false-positive and equivocal results and more than a little human distress. At all costs we must retain clinical judgment and exercise discrimination and restraint. In deciding to carry out a detection type of examination on a patient we must be definitive and selective. The involvement of the patient in a welter of screening tests is an abandonment of principle. It is not the art of medicine and conjures up a vision of erstwhile physicians sheltering behind the skirts of the biochemists, physicists and technocrats.

Breast cancer

This lesion is much commoner than cancer of the cervix and is the leading cause of cancer death in women. Much has been said about the biological predeterminism of breast tumours but we must reject a nihilistic approach towards a disease which ineluctably progresses. The sooner we treat the sufferer the less advanced the lesion will be and, in general, the more prolonged and agreeable the sufferer's life. Furthermore, we aim not only to reduce mortality but to alleviate distress. Improvement in the breast cancer outlook should be attained by monthly self-examination of the breasts, an annual meeting with the sister of the Community Health Team and by the use of mammography and thermography. The technique of self-examination enables a woman to learn the normal topography of her breasts and to be able to observe and report minor changes. The mammogram is a soft tissue x-ray of the breasts and is known to be a reasonable screening procedure—but is of course expensive. There are clear-cut indications for mammography (table II). Thermography came into being because of the fact that cancer cells metabolize more rapidly than ordinary cells and have a larger blood supply. Cancers are therefore hotter than the surrounding tissue and the differential in heat output can be shown on photographic film. The two techniques show great promise, especially used in conjunction.

Colon-rectum cancer

This is the great killing tumour because it occurs in both sexes. Routine barium examination of the apparently healthy are useless because they fail to detect small tumours. It is likely that routine
sigmoidoscopy of the apparently healthy is also a waste of time. However, rectal examination and sigmoidoscopy of those with symptoms is most desirable and people with colon-rectum cancer usually have symptoms which they will reveal if given the opportunity. Polypi are often seen in people without symptoms but the

TABLE II
THE INDICATIONS FOR MAMMOGRAPHY AND/OR THERMOGRAPHY ARE AS FOLLOWS:

<p>| | |</p>
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<tbody>
<tr>
<td>1.</td>
<td>Any indeterminate mass or nodule in the breast.</td>
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<tr>
<td>2.</td>
<td>The remaining breast in the post-mastectomy patient.</td>
</tr>
<tr>
<td>3.</td>
<td>Study of both breasts for obvious primary in one.</td>
</tr>
<tr>
<td>4.</td>
<td>Complaints in pregnant or lactating patients.</td>
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<tr>
<td>5.</td>
<td>Large pendulous or fatty breasts.</td>
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<td>6.</td>
<td>History of previous biopsies.</td>
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<td>7.</td>
<td>Indefinite complaints or cancerophobia.</td>
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<td>8.</td>
<td>Refusal of biopsy.</td>
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<td>9.</td>
<td>Cystic-like lesions for possible needle biopsy.</td>
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<tr>
<td>10.</td>
<td>Fibro-cystic disease of the breast.</td>
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<tr>
<td>11.</td>
<td>The unknown primary.</td>
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significance of these is not yet clarified. The modern tests for occult blood are of great value in the diagnosis of such cancers.

_Gastric cancer_

This lesion is declining in frequency in Britain but is a tremendous problem. Once again emphasis must be placed on symptoms. In the light of present day thinking lesions shown by barium meal examinations are at a late stage. Gastroscopy, and in particular the use of the gastro-camera can be advantageous. There is also evidence that cytology in skilled hands is a useful detection procedure. However, the cytological technique which is most appropriate to the alimentary tracts in this country is the buccal smear from the questionable lesion of the oral cavity. We have, in this regard, a responsibility as great as our dental colleagues.

_Lung cancer_

In lung cancer the symptom of cough is a more important warning sign than we used to think. Routine chest radiology is a most disappointing procedure and, used in a prospective survey, radiology did not seem to make the slightest difference to mortality. Sputum cytology in the high-risk group, that is to say those who smoke cigarettes, offers one solid hope for the future. It has been shown possible to identify malignant cells in the sputum at a stage where symptoms are minimal or absent and the chest x-ray is clear. Scrupulous investigation of those with positive sputum tests may reveal a very small bronchogenic carcinoma and the results of the resection of such lesions have given, initially at any rate, cause for
optimism. No time should be lost in setting up a programme for the screening, by cytological methods, of the high-risk group.

**Pelvic cancer**

In ovarian cancer detection the only hope at the moment is a routine pelvic examination each year but it must be conceded that ovarian cancer may appear suddenly. The method of diagnostic aspiration of the pouch of Douglas, while practicable, has not yet gained general acceptance.

In cancer of the body of the uterus there is usually an early onset of symptoms but the routine use of the cervical smear and, in particular, the examination of the vaginal pool specimen is of assistance.

Regarding carcinoma of the cervix it is evident that in addition to the routine cervical smear, we should use the blade end of the Ayre’s spatula to scoop up the vaginal pool and place both specimens on the same slide. While this will increase the detection of uterine body cancer it will probably pick up a certain number of ovarian cancers. The Davis cyto-pipette offers an alternative which can be applied by a doctor or technician or as do-it-yourself technique. The sample may be fed into a Coulter Counter which measures not only cell numbers but cell volume (and cancer cells are larger). The accuracy of this machine is impressive and this method should be assessed in Britain.

Blunderbuss detection which insists that every woman in a practice will have a cervical smear wastes the time, energy and accuracy of highly-trained personnel. There is no point in screening sexually inexperienced women for cervical cancer. Furthermore, it is the first smear which matters and there is no proof that there is a virulent type of cervical cancer to justify annual screening. The apparently virulent case is the missed case.

The evidence that circumcision assists in the prevention of cervical cancer is well-known. It is not generally known, however, that there is impressive evidence that cautORIZATION of the cervix is also a prophylactic and there are two retrospective studies which are extremely persuasive. It is wise, therefore, to give scrupulous attention to the condition of the cervix at the postnatal visit. In this regard the use of the cold cautery, employing liquid nitrogen, may prove a useful weapon. The procedure is painless and causes no after bleeding and no shock. Anaesthesia is unnecessary and the technique is suitable for general practitioners’ consulting rooms.

**Summary**

It is clear that we have to adopt a more aggressive attitude towards cancer detection, diagnosis and education, but as there are other diseases apart from cancer we must not be too narrow in our
approach. Above all we ought to be discerning about the tests we employ, where they are employed and who employs them. The time is ripe for us to adopt a method of health appraisal in Britain. The method must relate to the nature of our country, our population and our form of medical service. The concept of a Community Health Team responsible for an annual health appraisal is put forward as the cheapest and most practicable solution.

Acknowledgement

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APPENDIX

HEALTH QUESTIONNAIRE

Name.......................... Age........ Date of birth........ Date

Address................................................... Number of examination

<table>
<thead>
<tr>
<th>Family history</th>
<th>Personal history</th>
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<tbody>
<tr>
<td></td>
<td>Disease</td>
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<tr>
<td>Father</td>
<td></td>
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<td>Mother</td>
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<td>Grandparents</td>
<td>Pgf</td>
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<td></td>
<td>Mgm</td>
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<td>Siblings</td>
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APPENDIX
Past history
Illnesses (causing work loss)
Operations (date, hospital, surgeon)

Present condition
General health Specific complaint
Wellbeing Weight change
Sleep

ALIMENTARY
Appetite change Swallowing difficulty
Indigestion Abdominal pain
Change in bowel habit Blood in stool

CARDIORESPIRATORY
Hoarseness Cough Blood in sputum
Breathlessness Chest pain

URINARY
Urinary upset Blood in urine

REPRODUCTIVE
Discharge Discomfort Menstruation
Other (specify)

SWELLINGS AND SORES
Breasts (Other) specify

Examination
Date
General appearance Height Weight
Blood pressure
Abdomen
Breasts
Pelvis
Cytology
Blood
Urine Albumen Sugar Blood Other

Opinion
High risk case (specify) Occupation

Morbid finding
Disposal
Return in one year
Refer doctor
Refer for investigation