doubts about the satisfaction he got from his work. He had rejected emigration mainly because he believed the N.H.S. was fundamentally right—and within the State service he was secure, well protected by competent junior staff, and using his skills to supervise 1,000 deliveries a year indirectly, picking up the complications and abnormalities. "In a private practice environment," he went on, "I would be spending more of my time on normal cases, and I would not see the challenging and interesting stuff I get here." But it was ironic that only by growth of his private practice did he see any prospects of financial security. He had been appointed a consultant at 34, after only two years as a senior registrar, but by that time he had had nine different homes and had accumulated four children and heavy debts. He had had to buy a house large enough for a consulting room and a waiting room, and though the road to the cross-channel airport passed close by he saw no prospect of a summer holiday in France—there was just not enough cash in the kitty.

Electrocardiography and the Family Doctor

DAVID SHORT,* M.D., PH.D., F.R.C.P.

The diagnosis of coronary heart disease is one of the most difficult problems which the family doctor faces, and as a rule an electrocardiogram is essential. Who should record it, and who report it? Three answers have been suggested. The first is that every patient with suspected coronary disease should be referred to a cardiologist. The second is that family doctors should have their own electrocardiographs and thus be self-sufficient. The third answer is a hospital-based cardiogram reporting service. Under this arrangement the family doctor sends the patient to hospital with a short note of the relevant clinical data, the cardiogram is recorded by a technician, and the tracing is presented to the cardiologist for his report, which is then transmitted to the family doctor for him to make the final decision regarding diagnosis and treatment. A variation on this method is for the family doctor to arrange for the recording of the cardiogram and send it to the cardiologist for reporting.

There are advantages and disadvantages in all these schemes. For a cardiologist to see every patient should lead to the most accurate diagnosis; but the volume of work would be such that more cardiologists would be required. As things stand at present a major problem would be that of delay. Unless special arrangements were made for this type of consultation patients would often have to wait several days, if not weeks, for an appointment. Another disadvantage of this scheme is the loss of clinical independence of the family doctor. It would clearly be an advantage if he could manage the situation by himself without referring the patient to another physician.

Accuracy of Diagnosis

Many of the disadvantages of the first scheme would be overcome if the family doctor had his own electrocardiograph. Delay would be reduced to a minimum and he would be self-supporting. But what of the accuracy of the diagnosis? This is the snag. Only those with experience in this field appreciate the difficulty of accurate diagnosis of coronary disease. The electrocardiograph is very far from being a magic box. One of the major problems is that when an infarct is small and recent the cardiogram often shows no definite abnormality (Short, 1968). Another is that it may show evidence of infarction in a patient whose symptoms are non-coronary—for instance, in a patient with pleurisy or cervical spondylosis who has had a silent infarct in the past. It is often impossible to tell from a single tracing whether the abnormalities are old or recent. Another difficulty is the differentiation between left ventricular hypertrophy and lateral infarction.

Very few family doctors have either the training or the experience to enable them to make an accurate assessment of coronary disease in their patients. A crash course in cardiogram reporting is no solution to the problem because, apart from the recognition of the commoner arrhythmias, cardiographic interpretation cannot be learnt quickly; and, in any case, there is so much more to coronary diagnosis than interpretation of cardiograms. The only type of family doctor who could undertake this work would be one who had been trained for at least two years in a cardiac department and who undertook the diagnosis of coronary disease for a large group practice.

Reporting Service

What of the middle way—the cardiogram reporting service? There have been several encouraging reports of its use—for example, Seymour *et al.* (1968), Lorimer and Kennedy (1968), and Morgans *et al.* (1970). This scheme has the advantage of an expert opinion on the tracing while leaving the family doctor in control of the clinical situation. Its danger lies in the fact that the cardiogram so rarely shows clear evidence of infarction and so often shows only slight non-specific abnormalities (Short, 1969a).

Coronary disease can be accurately diagnosed only if the cardiogram and the clinical picture in all its detail are synthesized by one experienced doctor; in the same way that two sound eyes in one head are needed for accurate visual appreciation of spatial relationships. Detailed knowledge of the patient's symptoms, the shape of his chest, the character of the apex beat, the presence and quality of murmurs, as well as the level of the blood pressure and the drugs he is taking, are essential to diagnosis (Short, 1969b). The family doctor requires an unequivocal answer to the question: Does the patient suffer from coronary disease and, if so, is it progressive? Long experience of a cardiogram-reporting service has led me to conclude that a cardiologist with a single cardiogram and a brief note before him can seldom give it. The minor variation on this scheme by which the family doctor records the cardiogram and sends it to the cardiologist for reporting

*Consultant Physician, Cardiology Department, the Royal Infirmary, Aberdeen AB9 2ZB.

has the advantage of speed, but against this is the disadvantage that the tracing is often less reliable than that recorded by a hospital cardiographer. Otherwise it is open to all the criticisms which have been noted above.

Consultative Service

What then is the answer to the problem of coronary diagnosis in general practice? Probably the best plan is the organization of an emergency consultative service in which the family doctor could refer patients with suspected coronary disease to a cardiologist for an opinion the same day. Where a hospital has a coronary care unit it would be a good arrangement for a consultative suite to be available in this area. Patients could then be sent up for consultation or admission as required. This would obviously involve some increase in the cardiological work-load, but probably not a great increase. If the family doctor decided that the patient should not be moved from his home he could make use of the existing domiciliary consultative service. A possible alternative to this scheme would be for a cardiologically trained and experienced family doctor in a large group practice to see all the patients with suspected coronary disease in the practice.

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ONE HUNDRED YEARS AGO

Reports of Medical and Surgical Practice in the Hospitals of Great Britain from the British Medical Journal, 26 February 1870

SOUTH STAFFORDSHIRE GENERAL HOSPITALS AND WOLVERHAMPTON DISPENSARY

BY OUR OWN REPORTER

This is a building, the internal arrangements of which, for the most part, bear out the expectations raised by the view of its imposing exterior. It contains, at present, a little over 100 beds, but is about to be extended by the addition of separate fever-wards and an enlarged out-patient department. The majority of the cases are surgical; and a large number of accidents from machinery and burns are constantly to be found in the wards. The staircases and passages are worth notice, as very wide and well lighted; but the wards themselves are, in consequence, a little cramped for space, although thoroughly ventilated and yet sufficiently warm. A special feature in this hospital is formed by the day-wards for convalescent patients; and we noticed, in addition, other marks of attention to the comfort of the inmates, such as a couch in each ward, which are, we think, too often absent from our hospitals. Some of the floors are polished, and others washed. Mr. McDonald, the house-surgeon, was kind enough to show us several interesting surgical cases and afford much information on the general features of the surgical practice of the hospital staff.

Excision of Os Calcis.—Under the care of Mr. Vincent Jackson, we saw a girl, aged 18 years, from whom the whole os calcis of one foot had been removed for disease. The operation was performed last September, but the healing had been delayed by the persistence of one or two small sinuses which still remained open. She had no disease of the ankle-joint, and could, even at the time of our visit, bear tolerably firm pressure without pain. There seemed every prospect of her foot becoming very serviceable.

Lithotomy is done rather frequently at this hospital. The lateral operation is preferred. A tube is often used after the operation.

Ovariotomy.—One operation, a successful one, was performed last year.

Stricture of Urethra.—Mr. Jackson generally uses Holt's dilator in suitable cases, and has, we believe, operated on a considerable number of patients without any serious results. Quinine and opium are given after the operation.

Erysipelas beginning in the house is very rare. Mr. McDonald assured us that there had not been a case within the last twelve months.

No extensive trial of Lister's antiseptic treatment has been made. There is a children's ward nicely fitted up. There is no museum.