

to conferences or courses at home or abroad, gives him the much needed opportunity of refreshing his mind and adapting himself to advances in medicine. I hope that the European Association for Internal Medicine will provide just such facilities for the general physicians of Europe.

Collaboration of General Non-university Hospitals

H. DIRIART

The qualified specialist in internal medicine must maintain his knowledge at the level he reached when he specialized. This may be done by reading medical journals as well as regular attendance at his local hospital. Hence non-university hospitals have an important part to play in the continuing education of doctors, particularly since nowadays their facilities match the high standard of the doctors working in them. Moreover, the hospitals have had a considerable stimulus from the attachment of medical students to them for teaching, as well as from the building of medical postgraduate centres. It is important that the specialist in internal medicine should be integrated as much as possible into the hospital department and invited to participate fully in its work.

Postgraduate Medical Teaching Association, Paris
H. DIRIART, M.D., President

Continuing Education Outside the Hospital

R. SCHAUS

Even those with relatively easy access to hospitals and services cannot do without additional means of continuing education, such as reading medical journals. The choice of the other means depends on the preferences and geographical situation of the individual doctor. I shall now consider some of the really useful resources available in continuing education.

The medical lecture by an individual lecturer is still useful but its value is dwindling. Much more valuable are colloquia and round table conferences held with special speakers, which give the doctor a living refresher course on a specific subject. The advantage of direct contact lies in the dialogue which it allows and encourages.

We are all overwhelmed by the presentday proliferation of medical periodicals, and everybody must select his own special sieve through which essential papers will not pass. One solution might be for an association like ours to ask its members from various countries to draw up a list of the first-class journals in their countries, both in the field of general internal medicine and in related specialties. One can quote as an instance the booklet of the British Council on British medical periodicals.

It is also essential that every doctor should be able to obtain a bibliography on any given subject and in addition the articles

Institute of the Grand Duchy of Luxembourg
R. SCHAUS, M.D., President of the Faculty of Medical Sciences

he needs, whether as microfilms, photostats, or any other means of reproduction. Such an ideal service is offered by the Royal Society of Medicine to its members.

Self-assessment

Subjects which a doctor studies of his own free will are not always the same as those in which there are particularly large gaps in his knowledge. So the tendency has grown up to study what areas the doctor knows particularly well, which gaps should be filled, and at the same time to provide a means of filling them. The American College of Physicians took the initiative in this field in 1968 and also in 1971, when it sent out a document containing 100 questions to specialists in internal medicine in the U.S.A. After it had been corrected this questionnaire was returned again to the specialist (in confidence) telling him of the results and suggesting a possible bibliography for study. Since then, this type of experiment has been used more and more on the other side of the Atlantic.

This "self assessment of medical knowledge" may be achieved by other means. Examples include the *Textbook Study Guide of Internal Medicine*, with its 2,265 questions and answers, which is published in the U.S.A; multiple-choice questions in medical journals, with the answers published in the next issue; and collections in book form of, for instance, electrocardiograms with multiple-choice answers, the answers being printed at the end of the volume. Another technique in this field is programmed learning, which allows instruction to be geared to the individual. This system allows the reader to consolidate his knowledge or to acquire new facts.

Slides

Slides have now become an essential part of any lecture, but they may be used for teaching in another way—that is as a collection of illustrations relating to a particular topic. Thus, the College of Medicine of the Paris Hospitals has collected together an outstanding photograph library, where each set of colour slides is accompanied by a printed commentary, which is read out to the audience as the slides are projected. Obviously some subjects (such as endoscopy and radiology) lend themselves much better to this type of teaching than do others. Another possible way of using slides is to combine a set of them with a tape recording, so that they are projected with a synchronized commentary.

Radio and Sound Recordings

Radio has been used much less in medical teaching than in other fields. The School of Medicine of New South Wales in Australia, broadcasts programmes of continuing medical education three times every week. These last one hour and use a special wavelength, which can be received only by specially adapted receivers.

The telephone has been found useful for consultations with specialists or research workers over immediate specific problems, but so far experiments using it for actual teaching suggest that its value is negligible.

At the moment sound recordings are dominated by magnetic tapes, which have been widely used for some time. Tapes have many advantages. They can be recorded anywhere, edited, mass produced, and posted quickly. The doctor can listen to them anywhere and at any time. I personally have been very impressed by a regularly appearing internal medicine periodical in sound. These are cassettes playing for an hour and are published by the California Medical Association 24 times a year. Similarly, every

month the American College of Cardiology publishes cassettes commenting in sound on slides of electrocardiograms which are sent out at the same time.

Even so, the gramophone record has not been completely superseded, for the accurate reproduction of some sounds needs higher frequencies than can be recorded on to tape. We have greatly benefited from listening to a series of records of cardiac auscultation made by Professor Ravin of the Medical School at Colorado. A remarkable degree of acoustic fidelity can be obtained by using electronic simulation of heart murmurs. The various superimposed murmurs may be separated and played individually before being combined together as in the actual patient. Moreover, the way in which the murmurs change over the years may be reduced into the space of a few minutes. The set of recordings is published with a booklet so that one can follow the electrocardiogram and the ballistocardiogram at the same time. This is an example of how technology is better in some respects than clinical teaching at the bedside.

Television

Though in several countries medical television on the public channels has had some interesting achievements to its credit, it can only partially deal with the needs of the specialist in internal medicine. Not only are the programmes too few and far between,

but they have had to aim at too wide a medical audience, and have often been screened at inconvenient times.

The year 1971, however, will go down as the year when videotapes were introduced. Undoubtedly these will revolutionize many subjects, including that of continuing education in medicine. Already cassettes are available for feeding into a separate decoder attached to a television receiver. The next step will be to introduce television receivers which incorporate readers, so that one merely drops a videocassette into the appropriate slot. Several European, American, and Japanese firms are already actively engaged in marketing decoding equipment, though there are problems of standardization. Undoubtedly its price—at present, £200 sterling—will gradually decrease. A lending system for videocassettes and videorecords will make them available to all. The market in many fields, including that of education, is vast.

On 26 February 1971 six leading European publishers met in Zürich and founded an association for publishing audiovisual cassettes which would also constitute a collecting house of ideas and information. In medicine itself from 1 July a leading German publisher is to market an audiovisual magazine. Subscribers to it will receive twice every month for a period of a fortnight, two programmes lasting one hour each, with eight minutes of pharmaceutical advertising. The cost will be £1.50 per cassette of an hour. In the future one may foresee editions devoted to the needs of different specialties.

Gynaecology in General Practice

Management of Abnormal Bleeding

E. COPE

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Treatment

This article will deal with the management of patients with abnormal bleeding in the reproductive phase in whom organic disease has been carefully excluded by clinical examination and special investigations. Thus, essentially the problem is of dysfunctional uterine bleeding, and, generally speaking, if conservative therapy is well judged and the patient is co-operative spontaneous remission will occur sooner or later. Dysfunctional bleeding around the menopause is increasingly being treated by hysterectomy. This approach is due not only to the possible association of this type of bleeding with malignancy but also to the risks of hormone therapy and the inconvenience of conservative management, as well as the improved techniques of vaginal and abdominal surgery. Radiotherapy is still used to produce an artificial menopause. Though preliminary curettage is mandatory, this technique has the advantage that operating time and convalescence in hospital are shorter than with hysterectomy. On the other hand, ovarian function is destroyed and menopausal symptoms are common. About 1% of patients are subsequently found to have cancer, partly owing to failure of diagnosis at the time of irradiation. Damage to the bladder and

rectum may occur, but with good technique this should be rare. Late sequelae are pyometra and haematometra, while in younger women the sterilization may not be permanent.

HORMONE THERAPY

Oxytocic drugs such as ergometrine and pitocin have no place in the management of dysfunctional bleeding. Androgens had a vogue, whether given alone or mixed with oestrogens. They have no special therapeutic advantage, and now that patients with atypical endometrial hyperplasia are known to secrete excessive amounts of androgen there seems to be a definite contraindication to their use.

Though oestrogens and progestogens have been used for a long time, their real popularity in the management of dysfunctional bleeding coincided with the development of the contraceptive pill. The dose required to prevent conception is much less than was at first thought necessary, and the contraceptive pills now prescribed for dysfunctional bleeding may not be sufficient to control the abnormal cycles. Although the hazards of these drugs appear to be related to dose, the length of time for which they are given in dysfunctional bleeding is limited and the use of higher dosages in carefully selected patients is justified. The regimen employed must be adjusted to the individual patient, but in many cases a combined pill given for a few cycles from the fifth day of bleeding for 21 days will be effective. In general, the daily dose of oestrogen should not exceed 0.05 mg of ethinyloestradiol or mestranol, but a

United Oxford Hospitals

EDWARD COPE, M.D., F.R.C.O.G., Consultant Obstetrician and Gynaecologist