THE MUSEUM IN POSTGRADUATE TEACHING

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The Oxford Dictionary defines a museum as "a place in which objects illustrating art or science are kept for show". Since Medicine is a pleasing or troublesome mixture of both art and science this definition is highly applicable.

The object of the museum is to provide a running visual revision of high teaching quality which has the advantage of always being open and therefore offers itself particularly for a General Practitioner Centre. It is of particular benefit to the man who never goes to lectures and to the casual visitor who comes in for a cup of coffee or a library book. It is also of value for giving knowledge about small items, which, although important, may not be worth a full lecture in their own right. It is a useful method of presenting minor cautions or warnings such as not giving drugs to dubious cases which will conceal the condition. These can be made the subject of a small clinical illustrative chart.

A museum also acts as a sort of super notice-board for items of general practitioner interest and for keeping up good communication with irregular visitors. It also provides added visual teaching to all the other methods employed and it is known that some people learn faster from things seen than from that which is heard or read. The existence of a museum also provides a cross-interest between specialities since the exhibits of all departments are seen by the housemen and consultants of other departments.

At St. Peter's Hospital we use eight bays each 7' 6" x 8' 0". (Fig. 1). These have deliberately been made of this size so that they will accommodate beds for clinical meetings if necessary, and this is highly necessary for the F.R.C.S. classes. The bays are made of Dexion square, which is a black square metal tubing that gives a highly professional finish and these enclose screens of Sundeala board, which should not be of the super quality as this is too hard to put pins into. A pale grey colour is preferred. Each bay should be well lit and have small

Fig. 1.—St. Peter’s Hospital Museum.
full value from one's exhibits. There is a need for a catchword in large letters to attract the eye and to draw the interest of a casual passer-by to the exhibit. (Fig. 2). Spacing is highly important. I am advised by museum experts that if a woman looks at a dress shop and sees a large number of dresses in it she finds it impossible to come to a decision on any one and is likely to walk down the road to another shop where there is probably only one dress in the window. This will command her full attention and she will probably be irresistibly attracted to it and buy it. In the same way, one fact well presented will have a far greater impact and will be fully absorbed and command attention, whereas a board covered with too much information will not be as effective. One can supplement the main effect once interest has been aroused with various smaller, subsidiary facts, and I have found it useful to provide hand-outs and summaries of what is on the boards. For those who have no room for such a museum wall boards can be hinged to the wall, each containing an exhibit on either side.

Systematic presentation is highly desirable and in the Wellcome Museum the experts always show their exhibits in the same order, with screens divided vertically into—general, aetiology, geographical distribution, pathology, symptoms, clinical and treatment. The top of each part is headed by a different coloured label.

The types of objects which could be shown in a museum consist of such things as a pathological specimen of the week, which should act so as to draw attention to a text describing the condition in general and its essential features. Similarly, one should show a microscope slide of the week. Since the young general practitioners of to-day have only recently completed intern appointments one sees no reason why they should not still be interested in slides, particularly if these slides are of the kind of thing which a general practitioner might be expected to see for himself, such as haematology, urines, and scrapings of fungi. An ordinary microscope is useless for public demonstration. The first two people using it are likely to put it out of focus and a third to smash the specimen. A projecting microscope is an excellent method of showing slides. One only switches it on and the slide appears on a small screen. These cost about £250 and are very helpful in clinico-pathological demonstrations for the hospital's internal staff. On the other hand, the cheapest and perhaps the
The easiest way of showing slides is by having photomicrographs exhibited in a box with a small fluorescent tube behind. The colour photographs of the week can be shown in a viewer and this can show either some item of unusual interest, or again some fairly typical condition with a clinical tag attached to it reminding one of the features.

Good photoprints as a small clinical exhibit are also useful and these should have a description of the features shown. Thus, one could show a photograph of hypothyroidism drawing attention to the special features shown on the picture and beneath this putting the clinical and laboratory findings which one might look for.

We have provided a manikin for external cardiac massage with instructions as to how to do it. If done successfully a pulse appears in the neck—in our particular model this pulse has migrated and is somewhat submaxillary. Needless to say this has an arresting notice saying, “Can you do it? Have a try”. (Fig. 3.) Nearly every general practitioner in our neighbourhood has been tempted to try and see whether he can produce this pulse and this has probably been a very valuable exhibit.

There is also a general practitioners’ section and here there is a screen showing new book covers. We think this is important. It is one thing to go into a library and be confronted with the backs of hundreds of books and such a wide choice that it is impossible to settle for anything, but looking at new book covers one may well see just the book one wants to read, and in that way one may choose to read a book which one would not otherwise have noticed was in the library. We are trying to interest general practitioners in the epidemiology of disease in their area, and in this the Medical Officers of Health and the hospital are co-operating and at the moment we are obtaining lists of diseases and putting them up. Our next step will be to provide a large map with all the illnesses of which we can get information marked with different coloured flags, so that if a doctor meets an outbreak of diarrhoea he will know whether this is part of the general pattern of the neighbourhood or whether he should inform his Medical Officer of Health that there is something unusual in one part of his practice area.

Another very important exhibit consists of a list of good cases visible in the wards. Doctors often ask to see clinical cases and have clinical evenings, but unfortunately at any one time the number of acute clinical cases which are visible are few and one tends to fall back for clinical evenings on fairly typical long-standing cases such as valvular disease of the heart, of which there are probably plenty in each doctor’s practice. We therefore have this list which is constantly kept up-to-date by the registrars and shows every case which is either of unusual interest or a good and typical demonstration, together with the ward which it is in and the special features which it illustrates. Because in the past we have found that doctors were shy of going into the ward and asking to see these cases the notice explains that they can ask the Organiser of the Centre and she will then ring up the ward so that they will find themselves expected and welcome.

We also have a large home-made viewing box, which can be very cheap, and on this we are putting a programmed course of X-rays of the chest. These are starting with normal X-rays with plastic overlays outlining the various chambers of the heart and the normal features, and once these are fully grasped we shall go on to abnormal hearts.

The exhibits in a museum can be used for collecting cases which a consultant especially
wishes to treat. For instance, an exhibit on otosclerosis with a statement as to what are suitable cases for operation is likely to bring that kind of case to the specialist who wants it.

A part of the museum is also reserved for general practitioner research and information. In this there are such items as offers to collect information on business efficiency or to give information on appointment systems, plans of health centres which have attracted great interest, and so on.

A quiz corner is also a desirable feature. Pictures, X-rays and specimens can be exhibited with a notice saying, "Do you know what this is?" and beneath a small flap of paper which has to be turned up there is the answer and the reason why it is what we say it is.

Another important addition, which we hope to acquire, is the 800E projector made by Technicolor, marketed by the Rank Organisation. This costs about £80 and is a device in which one posts a small cassette of 8 mm. film into a slot and it is shown in colour on a large television-like screen for four minutes. With such an apparatus and an 8 mm. cine camera one can preserve items of great but transient clinical interest. For instance, a film of a hypocalcaemia showing Trousseau's sign with just how long it took to come on is something which one can never convey fully in a single picture, and one can think of many cases which one often sees in the ward and one wishes that interested people were there at that moment to see it. All these can conveniently be recorded on 8 mm. film and shown by these cassettes, which involve no threading of film and are very simple to use and just need piling up by the side of the machine.

Another technique is to take photographs of books, and sections of these can be enlarged on to printing paper so as to show large print and many pictures alongside the print. In one bay we have been able to illustrate the whole of bone tumours from Mr. Apley's book on Orthopaedics in this way.

All this presupposes the existence of a photographer and an assistant who has time to turn a roughly scribbled plan by a consultant into the finished article.

To keep a museum efficient it should be changed monthly. It has been said that a place is either a museum or a mausoleum. This depends largely on whether the exhibits are kept changing and are interesting. Hackett, in 1949, writing on undergraduate education,
pleaded for a medical museums bureau to prepare and circulate teaching material of high quality. This was for sending round the ordinary undergraduate hospitals. One cannot help thinking that, with Teaching Centres now all over the country, Hackett's medical museum bureau would be more useful than ever and one wonders whether people experienced in this sort of work, like the Wellcome Museum, could not be enlarged and paid to undertake such work. In the meantime, much can be done between individual centres by exchanging exhibits.

You may say, "Is this a waste of time and space?" One can only state that all the items we have exhibited have been seen, viewed or tried by nearly every general practitioner who visits our Centre. Many have spent over half-an-hour looking at these exhibits. Innumerable hand-outs have gone and, as a result of some of the exhibits, there have been requests for further information and more detailed exhibits on some items.

I must acknowledge the great help which has been given to me in preparing this talk by Dr. Duggan of the Wellcome Museum and by all his staff, and it would perhaps be right historically to say that the Wellcome Museum in its present form (Fig. 4) was largely inspired by the Royal Army Medical Corps School of Hygiene, which has had an instructional museum for many years.

I would like to finish by quoting Flower in 1898, who wrote that "a museum is like a living organism: it must grow or perish: it needs money and labour". I can indeed confirm that it requires much labour.

**DISCUSSION**

**Dr. Galbraith** (Chelmsford): A lot of labour is required for this. How can we form a central organization to circulate exhibits? How can the presentation of these exhibits be standardized? Wallboards with holes and pegs are very easy to use.

**Dr. Plunkett**: I regard the Wellcome Foundation as the experts. Perhaps they could be persuaded to extend their activities.

**Dr. Lennox**: The whole Glasgow undergraduate library has recently gone over to pegboard with excellent results.

**Dr. Lowe** (Leeds R. H. B.): What is the subscription for Index Medicus and the World List?

**Mr. Cornelius**: The subscription to the Index Medicus is £18 0s. 0d. a year. The annual cumulative annual volumes cost a further £18 0s. 0d. The World List of Scientific Periodicals costs £25 for the set of 3 volumes. It has now merged with the British Union Catalogue of Periodicals and the supplements to this cost £7 0s. 0d. a year.

**Dr. Plunkett**: The list of Contents of Current Periodicals produced by the Librarian of the Postgraduate Medical School is very valuable and only costs £3 3s. 0d.

I think that a museum of pathological specimens is beyond the resources of most non-teaching hospitals, costing a lot to prepare and mount. I do not think rows of bottles are very valuable. Fresh pathological specimens with the whole clinical story with them make very useful exhibits. They must be changed regularly.

**Dr. McCall** (Stoke): The preparation of pathological "pots" is quite expensive and continuous attention is needed. We take a lot of post-mortem room photographs. How can these be best displayed in a museum? We thought of providing a 35 mm projector with slides loaded in magazines for projecting a short distance.

**Dr. Plunkett**: A back projector is needed for daylight use.

**Dr. Whitfield**: This leads us to the important subject of medical photography.

**Dr. Watkinson** (York): The most suitable projector for exhibiting 2" x 2" slides in an exhibition is the Kodak Carousel. It has a circular magazine which holds I think eighty slides which can be made to rotate continuously, projecting the slides at timed intervals. These can be projected on to a screen and if necessary a tape-recording can be played at the same time.

I wonder if Dr. Plunkett had realised the importance of starting a museum of clinical teaching material. This should include both everyday cases and cases who provided diagnostic problems. At the Mayo Clinic a form of teaching called the 'blackboard workout' is used very successfully for postgraduate students. Information from the case records is given to an intern who records it on a blackboard after being presented with a history and examination, makes a provisional diagnosis and asks for the results of various investigations; these are then given to him and he progresses successfully or unsuccessfully to a correct diagnosis. By keeping a collection of easy and more difficult cases in the clinical museum this method has proved a most useful one in postgraduate teaching.

**Dr. Schofield** (Bath): Specimens can be kept, and can be handled, for some time in polythene bags half filled with formalin.