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THE USE AND ABUSE OF THE BIOPSY

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The high degree of specialisation in modern medicine has made it essential that there should be a close co-operation between the clinician and his colleagues in the laboratory or the x-ray department. While this is fairly easy to obtain in large hospitals, where there is a chance of arranging meetings, and telephone conversations are a simple matter, the situation is different in Malaya, where specimens sometimes have to be sent long distances, and the opportunity of discussion does not exist.

In such a situation, it then becomes vital that as much relevant information as possible should be supplied with the specimen when it is submitted. This applies to any type of specimen, whether for biochemical, haematological, or bacteriological examination, but it is particularly important in the case of the surgical biopsy.

While the biopsy is one of the most valuable single laboratory investigations, it should be realised that there are definite disadvantages to offset the advantages, and these disadvantages are greatly increased when the pathologist has to study the material without the information that may be so necessary.

The advantages of the biopsy are of course fairly obvious. It may, and frequently does, confirm a suspected diagnosis or reveal conditions that are hitherto unsuspected. Combined with the use of the various 'scopes', it may avoid the necessity for laparotomy or other major surgical procedure. The development of the needle biopsy technique is of considerable value in liver disorders, and is used to advantage in other organs.

The limitations of the biopsy are, however, not so clearly realised. Usually, only a small fragment of the lesion is taken, and this may not be a truly representative fraction of the whole. Thus it is difficult, and sometimes impossible, to give a definite negative report, as when it is required to exclude malignancy, a fairly frequent request. For instance, a biopsy of an ulcer of the buccal mucosa may show simply inflammation and hyperplasia of the squamous epithelium, while in another area there may be frank carcinoma.

In dealing with inflammatory lesions, it is sometimes possible to demonstrate organisms, as in lepromatous leprosy, but it is no substitute for a proper bacteriological examination. Similarly, in conditions such

as the leukaemias, biopsy of, say, a lymph node, is not so helpful as a proper haematological examination, though a bone-marrow biopsy may be valuable.

Hydatidiform mole should be mentioned in particular, as it is fairly common in Malaya, and is always a cause for anxiety owing to the likelihood of it being the forerunner of choriocarcinoma. It is important to realise that examination of adequate curettings after delivery of the mole is more likely to give an indication of possible malignancy than examination of the mole itself, although unfortunately it is by no means a certain method.

Also, there is a certain risk involved in taking biopsy specimens from highly malignant tumours, although of course where there is no alternative, and there often is not in this country, the risk has to be accepted.

So far as the relevant details are concerned, there are some which apply to all specimens, and others which apply only to particular specimens. Some indication of what these should be follows:—

General

The age, sex and race of the patient are fundamental, and also the history, particularly the duration of symptoms and signs; and the site of the lesion, described as accurately as possible and giving if possible the tissue it arises from; e.g. skin, bone, subcutaneous tissue, etc.

Skin

It is important to know whether the lesion is single or multiple, and in the case of a suspected carcinoma, whether there is any history of a previous lesion such as a burn of ulcer. It is also a help to put forward a tentative diagnosis, as the histological appearances of many skin lesions are non-specific, and may or may not be consistent with the clinical findings.

Bone and Joints

The x-ray appearances are of particular value, and there are many lesions that cannot be diagnosed with certainty without them. In connection with this, it is useful to know whether the lesion is in the epiphysis or diaphysis, and whether it is single or multiple. The possibility of metastases should be borne in mind.

Lymph-nodes

Enlarged glands are commonly submitted for examination, and it is helpful to know whether the enlargement is confined to a single gland or group of glands, or is generalised. If metastases are suspected, it is a good thing to mention the likely site of the primary growth. In cases of generalised enlargement, it is better to avoid the inguinal nodes,

as they are likely to be distorted by inflammation and scarring. Lymph-node biopsies in suspected leukaemia are not always helpful, but if one is done, then the details of the blood-count should be sent with the other information.

GYNAECOLOGY

The endometrium is the tissue most frequently seen by the pathologist, and the majority of these specimens are submitted from cases of 'functional' haemorrhages, so that the date of the last menstrual period is of great significance. It is also the information most frequently omitted.

When writing down the relevant details, it is not necessary to go into details of treatment, except in a few special cases, such as suspected thyrotoxicosis, when it is useful to know if pre-operative treatment has been given, or specific infections, such as tuberculosis, where specific treatment may alter the appearances. This does not apply to haematological specimens, when details of treatment are vital.

A few well-chosen words are all that is necessary, e.g.:—

> "Male, Chinese 17.
> Six months pain, swelling lower end left femur, rapidly growing.
> X-ray suggestive of osteo-sarcoma".

Such a history is much more use than this:—

> "Male, Chinese, ?.
> Swelling left leg, not responding to Antibiotics."

or,

> "Female, Malay, 25.
> Three months amenorrhoea, L.M.P. 23/9/60. Three days bleeding p.v. with lower abdominal pain."

is much more use than this:—

> " ? ", Malay, 25.
> Bleeding p.v., curettings."

On the whole, the use of initials and abbreviations should be avoided, as they are likely to lead to confusion. A few such as L.M.P., Cx., or P.T.B. are well-known, but what is one to make of 'osteo', N.G. or S.O.B.?

Finally, a legible signature, or even a personal 'chop' would be a great advantage, as reports could then be sent direct, instead of through an impersonal general office, with a decreased chance of the report becoming mislaid; and also, if it is necessary to telephone on account of urgency, direct contact can be made immediately.

Some tips on sending biopsy specimens may not be out of place. If they are at all large, they should be sliced open at about 1 centimeter intervals to allow adequate fixation. There should be at least five times as much formalin as there is specimen. Fluids sent for cytological examination should also be diluted about five times with formalin.

It should be remembered that although it is easy to put soft, unfixed tissue into a bottle, even one with a narrow neck, it can be, and often is, exceedingly difficult to get it out after a day or two in formalin; and the tissue has sometimes to be cut up, or the container broken, to do it; so that receptacles of adequate size should be used. The bottles must be carefully labelled and should check with the accompanying request form.

SUMMARY

Ideally, liaison between the clinician and pathologist should be as close as possible. In Malaya, where Pathology is very largely centralised, personal contact has often to be replaced by the written report. The importance of adequate relevant details sent with the specimen is stressed.

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