

Occasional articles

A Christmas lesson: biopsy techniques for the young clinician

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The following remarks are not original but are the cumulated advice gathered from histopathologists in various parts of the United Kingdom, in their search to improve the service they give to the clinician.

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Skin biopsy

- 1 Always inject a large volume of local anaesthetic into the area to be biopsied. The more rapid the better, as this really distorts the tissue planes making microscopic evaluation a real challenge.
- 2 Always biopsy the centre of any ulcer as this will guarantee that the pathologist will not be able to differentiate between a benign or malignant process as he enjoys the vista of necrotic inflammatory tissue.
- 3 The biopsy specimen should always be razor-thin. Never include the underlying dermis or subcutaneous tissue as this may lead the pathologist to a correct diagnosis.
- 4 If at all possible inject a tattoo pigment marker before your biopsy. Particularly in the case of Kveim biopsies this extends the pathologist's ability to make a diagnosis without the help of artificial light.

General biopsy

- 1 Grasp the tissues as firmly as possible with forceps. Crushing forceps are best and if you have a number to hand so much the better. Remember crushed tissue, particularly lymph glands, presents the pathologist with a real challenge.
- 2 Heat is also useful. Your mother will always tell you what a good fixative heat is. So, please, "cook" the tissues by diathermy before you biopsy the area. The angry noise of the pathologist referring to heat artefact is only his funny way of expressing his appreciation.
- 3 Always slice into the biopsy specimen area before placing in fixative. If you can do this in different directions and at different depths this will guarantee that the pathologist will not even be able to recognise the underlying tissue or organ.
- 4 Fixative is most important. Always use as little as possible. Remember economy is the watchword of the Health Service. For the same reason use the smallest container you

can find in which to compress the tissue. This ensures that the pathologist will be unable to remove the specimen from the container without breaking it, thereby ensuring the driving of glass fragments into either the specimen or the pathologist.

Remember that more than one biopsy, particularly from different sites, in the same container is also economical. *Never use a chemical fixative.* Saline or water is the best to ensure adequate tissue autolysis. If you are really keen then a bacteria transport medium can be used and will ensure a good bacterial growth as well. Remember this produces the best effect if carried out in the summer months and where a delay in examination is likely (weekends).

Lymph nodes

Always biopsy the nodes in the inguinal region if at all possible. The non-specific chronic inflammatory reactions produce such a bewildering array of features that no pathologist could fail to be excited by their presence. Always select the smallest and hardest node present, remembering that crushing with forceps is bound to improve the microscopic picture. On no account remove a large node with skill and delicacy, and never inform the pathologist that there is a generalised lymphadenopathy. After all, Sherlock Holmes managed with very little information didn't he?

Gynaecology

- 1 Never delay the endometrial curettage for a cervical biopsy. Always perform an aggressive endometrial biopsy *before* the cervical biopsy. No pathologist wishes to examine a tissue with a complete, intact surface mucosa; much more fun to guess whether there ever was neoplasia present rather than simply to recognise its presence.
- 2 Cervical cytology is best performed during menstruation and never attempt to obtain endocervical cells in your smear.

Frozen sections

- 1 Do not anticipate the need for a frozen section by ascertaining whether the pathologist will be available. Surprise him: ring him after you have got the biopsy specimen in hand. You must remember that the pathologist and his staff are just sitting waiting at all times for *your* specimen. After all, they have

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no other commitments or responsibilities except to you and your unexpected demands. Never tell the pathologist that the tissue may be infected. Remember, he will only panic and delay the diagnosis. Do not tell the pathologist that the patient has been previously diagnosed. He will have so much pleasure attempting to confirm your diagnosis on a minute fragment of tissue. And it is one way of auditing the pathologist's ability.

General information

- 1 Do not label the container or slide with the patient's details. The panic of attempted identification produces hours of enjoyment for the histopathology and office staff.
- 2 On no account complete the accompanying forms. Particularly do not state the ward, hospital, or referring clinician. Much pleasure is derived in the laboratory trying to decide where to send a completed report, particularly if it is urgent or vital.
- 3 Do not accept that routine specimens will take 24 hours to process. Keep enquiring for the result hourly after you have taken your

biopsy specimen.

- 4 Try to select a one-armed pathologist for your advice, thereby preventing the opinion that "on the one hand" it could be this "but on the other hand" it could be that.
- 5 Do not influence the pathologist in any way. So do not state (a) age or other patient details, (b) site of origin, (c) clinical history, (d) previous biopsy numbers or results. After all, the pathologist is supposed to "know everything" and "do everything"—and he "is always 10 minutes too late" anyway.

Summary

The above advice cannot hope to be complete and I am sure that your own pathologist will have his own words of wisdom: go and talk to him and increase your knowledge.

However, be sure to remember the above points and you will have made an important advance in your quest for quality of diagnosis and clinical care.

Have an enjoyable Christmas and remember that there is no one more skilled than your pathologist at "slicing the bird", so why not invite him for lunch?