

EDITORIAL

Dear Friends,

We come to you after six months, having made no progress regarding communications between us. We are sitting in the sweltering heat of Bombay, with high tempers and low finances. A 'May day' signal is being sounded and your help urgently solicited for articles and opinions.

We would like to thank our President, Dr J. Roy Chowdhury for appreciating our maiden attempt at the Newsletter as we certainly need a lot of moral support to continue this venture.

we are giving you a bird's eyeview of the Jaipur conference in this issue along with Dr. Trott's Lecture being printed in detail. Dr. Monga's Lecture will be coming to you in the next issue.

So long folks,

Sincerely yours,

Maya Lulla

Darshana Daftary

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MEDICINES FOR MANKIND

Guest Lecture by **Dr. Peter A. Trott**
at XII Annual Conference of I. A. C., JAIPUR

USES AND ABUSES OF CYTODIAGNOSIS

Introduction

Aspiration cytodiagnosis has become increasingly popular in recent years as a method of making a tissue diagnosis. Begun during the 1920's at the Memorial Hospital, New York, under the guidance of James Ewing it underwent expansion in the 1960's in Scandinavia and has now been revived in the U. S. A. and adopted in many centres in the U. K. Therefore it is appropriate at this point in time, to attempt to assess its role objectively and come to certain conclusions regarding its place in the diagnostician's armamentarium.

Terminology

Aspiration cytodiagnosis has been given many names including "fine-needle aspiration biopsy", "skinny-needle biopsy", and simply "aspiration biopsy". This latter name is favoured by the Scandinavians, and all the classic papers by Franzen and Zajicek from the Karolinska institute in Stockholm call the procedure by this name. In the experience of clinicians and pathologists at the Royal Marsden Hospital, the term "aspiration biopsy" causes confusion among clinicians who are uncertain whether they are asking for a rapid atraumatic test that has a relatively low specificity or one that will provide a helpful result in rather more cases but takes several days to get an answer and requires a formal operation. I strongly favour the term "aspiration cytology" for the science and "aspiration cytodiagnosis" for the procedure, reserving the term "biopsy" for a histopathological process.

Comparison with Histopathological Biopsy

The following table compares the two diagnostic procedures of aspiration cytodiagnosis and histopathological biopsy.

	Procedure	Facility of Diagnosis	False Reports		Anaesthetic	Cost
			Pos.	Neg.		
Histopathology	Biopsy	Narrow	None	Few	Needed	High
Cytopathology	Aspiration	Broad	None	Some	Not needed	Low

The "facility of diagnosis" has nothing to do with accuracy but rather indicates the spectrum of diagnosis that is possible with the two techniques. Cytopathologists should appreciate that tissue diagnoses are usually stated in histopathological terms and avoid the temptation to apply histopathological terminology freely for cytopathological material. The diagnostic facility of cytopathology is to indicate the difference between benignity and malignancy, although in many instances carcinoma as opposed to sarcoma can be diagnosed and abscess as opposed to other benign lesions can be indicated. A histopathological biopsy by comparison, can not only indicate carcinoma but suggest adenocarcinoma with or without mucus secretion

(Cont.)

and even having a papillary pattern. Thus the diagnostic facility is narrow, and there is even the opportunity to do special stains on serial sections in order to refine the diagnosis further.

There are two conditions, however, which have characteristic cytological features that enable an accurate diagnosis to be made. One of this is small cell carcinoma of the bronchus and other sites (formerly called oat-cell carcinoma), aspirates from subcutaneous metastases of which show a characteristic salmon pink coloured stain of their nuclei in a Giemsa preparation. Squamous carcinoma of the head and neck often spreads to regional lymph nodes where the elongated appearance of the nucleus and keratinized cytoplasm enables a diagnosis of squamous carcinoma to be made from an aspirate.

False reports are usually the product of the amount of material available. Thus, more malignant lesions are missed by aspirates than with needle biopsies - "some" being rather more than "few" in the in the table. False positive reports are of course occasionally made by both techniques - all pathologists are human and one can become tempted to offer a definite diagnosis when pressed to do so by a clinician (usually a surgeon) who 'knows' a particular lump is malignant, but in which the quality and quantity of the material aspirated is poor. It is far better to hold off and request more material or re-aspirate the lesion oneself and make a clinical diagnosis at the same time. Suspicious reports should be discouraged, and cytopathologists should not "sit on the fence", but attempt always to indicate benignity or malignancy. By (a) only diagnosing malignancy when it is certain and otherwise calling it benign, and (b) avoiding reporting things to be "suspicious", more false negatives will occur but false positives will be eliminated and the clinicians will be pleased with the service.

No anaesthetic is needed for a cytopathological aspirate because the needles are narrow and comparatively painless. Indeed, the procedure is complicated by the injection of intradermal local anaesthetic because a subcutaneous lump may be difficult to palpate when the texture of the overlying skin is distorted. Thus the cost is far less, both in terms of time and expensive materials. When aspiration cytodiagnosis replaces surgical excision biopsy requiring a general anaesthetic, which happens often in the field of head and neck cancer then the saving in cost is compounded.

Method

No one method is used universally although operators usually find a method that they like after trial and error. There are several devices designed to hold the syringe and apply negative pressure, but many workers have found that a 10 ml syringe held in the hand is the method of choice. This has the advantage of allowing the texture of the lump aspirated to be appreciated and so provide the clinician with an additional clinical sign. Holders for 10 or 20 ml syringes specially designed for aspiration cytodiagnosis called "Cameco Syringe Pistols" can be obtained from the following address :-

Henley's Medical Supplies Ltd.,
Alexandra Works,
Clarendon Road,
London, N8 0DL
United Kingdom

The essential requirements for aspirating solid tumours are the following :- (1) An air-tight syringe and needle because great suction is required to extract cells from a solid tumour. (2) Aspirating the right place, i.e., putting the sharp end of the needle into the middle of the tumour and aspirating so far as is possible in several places. (3) Ensure that the carefully aspirated contents of the material are squirted onto a slide and smeared in such a way that they can be stained. This is done by either drawing up a small amount of air (about 2 ml) into the syringe before aspirating which can be used to push the contents of the needle onto the slide after the needle is withdrawn, or by detaching the needle from the syringe before pulling it out of the tumour and drawing air into the syringe with which to squirt the material in the needle onto the slide.

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