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Laboratory diagnosis of *Branhamella catarrhalis*

Ahmad *et al* have highlighted the problem of distinguishing *Branhamella catarrhalis* from the *Neisseria* genus¹ but their identification scheme of up to nine characterisation tests may not find favour in a busy diagnostic laboratory.

To rely on the failure of *B catarrhalis* to grow either anaerobically or on selective media is to place much emphasis on a negative test. Furthermore, it is recognised that *B catarrhalis* may grow on modified Thayer-Martin (MTM) medium, and may fail to grow on nutrient agar incubated at 22°C.² The lack of pigmentation of *B catarrhalis* is likely to be a more useful characteristic than its positive superoxol test. *N perflora*, *N pharyngis*, and *N mucosa*—all superoxol negative—are pigmented as are the common superoxol positive non-pathogenic *Neisseria*.³

The demonstration of the ability of *B catarrhalis* to liberate high concentrations of butyric acid from tributyrin is a useful diagnostic test^{3,4}: it can be carried out using commercial discs impregnated with tributyrin and phenol red (A/S Rosco). A positive reaction is indicated by a yellow colour after six to 12 hours' incubation at 37°C. If the indicator remains red after 24 hours the test is negative. *B caviae*, *B ovis*, and *B cuniculi* produce moderate amounts of butyric acid but are not encountered unless the specimen is of animal origin. All *Neisseria* strains produce negative results.

The colonial appearance of *B catarrhalis* will distinguish it from the pathogenic *neisseriae* *N meningitidis* and *N gonorrhoeae*. The following minimal criteria will differentiate *B catarrhalis* from non-pathogenic *Neisseria* species: lack of pigmentation, failure to produce acid from glucose, nitrate reduction, tributyrin and Dnase activity.

R P D COOKE

Department of Medical Microbiology,
Medical School,
University of Manchester,
Manchester M13 9PT

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Dr Ahmad comments:

Dr Cooke has perhaps missed the point of our paper. We set out to discover the simplest way of accurately identifying *B catarrhalis* and differentiating it from other *Neisseria* species. Of course, there are many other tests that can be applied to achieve the same purpose. The main tests used in our study, in addition to usual microscopy and carbohydrate fermentation tests, were superoxol and Dnase activity. The growth on various commonly used culture media and under different conditions is recommended for difficult strains not identifiable by the routine techniques.

The colonial and microscopic appearance of *B catarrhalis* is very familiar to all experienced workers in respiratory bacteriology. One would not rely on this criterion alone. Similarly, pigmentation and even rough and smooth nature of colonies in the family *Neisseriaceae* is variable. Tributyrin hydrolysis is a valuable test, has recently been made commercially available, and could be used if so desired as an additional test. Nitrate reduction is yet another available test but, when using Dnase and superoxol tests, we found both to be unnecessary.

Vero toxin producing *E coli* in haemorrhagic colitis

Walker, Upson, and Warren tested 80 faecal samples from patients with bloody diarrhoea or microscopic evidence of red blood cells and found four with *Escherichia coli* 0157 and 22 with *Campylobacter*, *Salmonella*, or *Shigella*.¹ We have also looked for Vero toxin producing *E coli* in patients with haemorrhagic colitis. Freshly passed stools from 40 patients recently admitted to the Northwick Park Lister Infectious Disease Unit were quantitatively cultured on both selective and non-selective agar. Ten colonies of each type of coliform were subcultured for identification and further testing, including subculture from both the higher and lower dilutions inoculated. Fresh rectal biopsy tissue from 17 patients was homogenised and cultured in a similar way.

Fourteen patients yielded campylobacters, salmonella, or *Shigella*; one specimen contained *Entamoeba histolytica* trophozoites. No *E coli* were isolated from seven patients. *E coli* from the remaining 18 patients were sorbitol fermentors. Six biopsy cultures yielded sorbitol positive *E coli* and no biopsy yielded organisms not also found in the stool. These *E coli* strains were inoculated into syncase/glucose broth and tested for Vero toxin production.² A Vero toxin positive control strain obtained from Dr Sylvia Scotland (Colindale) and a Vero toxin positive strain isolated from a patient with haemolytic uraemic syndrome by Dr SP Borriello (CRC) were tested in tandem. Both positive control strains were positive on assay in Vero cells, but none of the *E coli* strains from patients with haemorrhagic colitis was.

Bloody diarrhoea without routinely recognised microbial or viral pathogens is a common presentation to an infectious disease unit.^{3,4} Vero toxin producing *E coli* are clearly responsible for some cases of haemorrhagic colitis in the United Kingdom. Our results, which agree with those of Walker *et al*, show that these organisms do not appear to be responsible for the common, sporadic, form of haemorrhagic colitis seen in the community.

E LARSON
A WELCH

Clinical Research Centre,
Division of Communicable Diseases,
Watford Road, Harrow,
Middlesex HA1 3UJ

References

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Book review

Steroid Hormone Receptors. Their Intracellular Localisation. Ellis Horwood Series in Biomedicine. Ed CR Clark. (Pp 277; DM 125.) VCH. 1987. ISBN 0-89573-498-2.

This multiauthored book examines the ques-

tion of intracellular localisation of steroid hormone receptors in a series of articles which critically evaluate all of the available methodology including both biochemical and histochemical techniques. As such it is a valuable and timely addition to the literature.

Despite the fact that the steroid hormone receptors have been actively studied over a period of some 30 years, there is still a good deal of confusion about the intracellular compartments in which they exist.

In an introductory chapter EV Jensen puts a brave face on this confusion by pointing out that if all receptors, both native and activated, had remained bound in the nuclear fraction of tissue homogenates, it would have been much more difficult to have recognised the different forms of the protein and their interrelation, so there may have been considerable delay in discovering the phenomenon of hormone induced receptor activation. Nevertheless, it still remains possible that other sites exist for receptors, and a later chapter in the book deals with the question of membrane associated steroid hormone receptors, although this is still an area of controversy.

There is thus a considerable amount of information available in this book which is timely and useful to a wide readership. Regrettably, extracting the information when required is a good deal more difficult. The index is very thin and hardly amounts to much more than a list of the different types of hormones, while the contents page listed the chapter titles all right but didn't give page numbers. These amateurish errors in subediting regrettably distract from what is otherwise an extremely useful publication.

GP VINSON

Correction

Immunocytochemical detection of tumours of neuroectodermal origin

There was an error in the Laboratory technique by P J Carey *et al* (May 1988;41:586-589). The last two sentences of the first paragraph on page 586 should have read:

When the infiltration is heavy the morphological diagnosis of undifferentiated malignancy is straightforward, but the differential diagnosis from leukaemia, lymphoma, or other primitive tumours can be difficult on the basis of appearance alone. When the level of infiltration is low, morphological detection can be difficult even when the diagnosis is known.

Notices

Postgraduate Course in Gynaecological and Obstetric Pathology with clinical correlation

April 10-14, 1989

The departments of Pathology, Massachusetts General Hospital and Brigham and Women's Hospital, Harvard Medical School, will present a postgraduate course in gynaecological and obstetric pathology under the direction of Drs Robert E Scully, Robert H Young, and Shirley G Driscoll.

This course is designed for pathologists and obstetrician-gynaecologists at resident and practitioner levels. It will provide an in depth review of gynaecological and obstetric pathology with emphasis on morphological diagnostic features and clinicopathological correlation, including management. Special attention will be paid to recent advances and newly recognised entities. Instruction will be primarily by lecture, but will also include case presentations and discussion periods. Each participant will receive a comprehensive course syllabus.

Fee: \$595.00 (residents and fellows \$395.00).

For further information contact: Department of Continuing Education, Harvard Medical School, 25 Shattuck Street, Boston, MA 02115, USA. (Telephone: 617-732-1525.)

Dermatopathology self-assessment workshop

A dermatopathology self-assessment workshop will be held at Guy's Hospital, London, Tuesday 18 and Wednesday 19 April 1989.

The course is for both pathologists and dermatologists and will cover a broad range of subjects. Participants will have an opportunity to study 100 unknown slides during two microscope sessions, followed by a formal discussion.

Fee: £75.00 for all participants.

For further information please contact: Marion Ellis, Secretary to D M MacDonald, Dermatology Department, Guy's Hospital, St Thomas Street, London SE1 9RT, United Kingdom.

Cytology tutorial workshop 1989

Friday March 31 and Saturday April 1 1989

Postgraduate Medical Centre,
Brighton General Hospital

Lectures and microscopy on gynaecological, breast, genitourinary, lymph node, thyroid and lung cytology.

Speakers: Elizabeth Hudson, David Melcher, Russell Smith, John Webb and Jennifer Young.

Enquiries to: Mrs Jean Crisp,
Department of Clinical Cytology,
Brighton General Hospital, Elm Grove,
Brighton BN2 3EW.

Journal of Clinical Pathology

Symposium

Thursday October 6, 1988

at 2 p.m.

at the British Medical Association

How to write a scientific paper and get it published

Speakers will include Dr Stephen Lock, Editor, *British Medical Journal*, Dr John Lilleyman and Dr David Lowe, Editor and Deputy Editors, *Journal of Clinical Pathology*, Caroline White, Technical Editor, and Bill Friend, Head Reader at Eyre and Spottiswoode printers.

Cost £10 — Limited number of places available

For further details please contact:
Mrs Mavis Burrell, *Journal of Clinical Pathology*, BMA House, Tavistock Square, London WC1H 9JR