An easy method for isolating Treponema pallidum from patients

We recently described the cultivation of rabbit-passaged *Treponema pallidum* (Nicols strain) in subcutaneous chambers implanted in the backs of golden hamsters.[1] We now report the use of this system for the cultivation of pathogenic *T. pallidum* taken directly from an extragenital syphilitic lesion.

A man attended the special clinic at this hospital in November 1979 with a two-month history of three painless sores on the right thigh. He gave a history of a casual sexual encounter with an unknown woman in North Africa in May 1979. On examination there were three crusted sores on the right thigh and the scar of a freshly healed lesion at the base of the penis. No other signs of primary or secondary syphilis were seen. The patient's serology was VDRL positive at 1 in 8, WR positive, RPCFT positive, FTA (ABS) positive, and TPHA positive. He was treated with 10 daily intramuscular injections of 1·2 Mega units of procaine penicillin and all three sores healed during the subsequent two weeks.

Dark-ground examination of the exudate taken from the largest sore on the day of presentation showed three treponemes per high-power field. A 50 μl sample of the exudate was injected into a previously implanted subcutaneous polythene chamber in a golden hamster.[1] The hamster's chamber fluid was examined weekly by dark-ground microscopy, and motile treponemes were first seen after 14 days. The number of treponemes present in a standard aliquot of the chamber fluid increased 24-fold during a 50-day examination period. This clearly indicates that the system supports the multiplication of freshly isolated treponemes.

We think that this method offers an easy system for the isolation and comparative study of more strains of *T. pallidum* from patients. The chamber can be easily inoculated and repeatedly sampled. It is also probable that it might be useful in studying other pathogenic treponemes.

SI EGGLESTONE
Public Health Laboratory, Exeter EX2 5AD
GD MORRISON
Venereology Department, R D & E Hospital (Wonford), Exeter, Devon

Reference

[1] Morrison GD, Egglestone SI, Northwood JL. *Br J Vener Dis* 1979;**55**:320-4.

The Howie Code

The Howie Code requires us to treat all specimens of sputum with the same precautions as a culture of tubercle bacilli. I do not know of any published evidence of the actual likelihood today of specimens of sputum containing any demonstrable bacilli, in particular when the doctor sending the specimen does not think it relevant to ask that bacilli be looked for. It seemed, therefore, that our experience might be of interest to others.

This laboratory receives over 8000 specimens of sputum a year for ordinary bacteriology and over 6000 with a specific request to demonstrate acid-fast bacilli. Most of the latter are from patients under the care of chest physicians or thoracic surgeons, and about 8% of them yield mycobacteria on culture.

In 1976, it was decided that all sputa from patients not under the care of physicians or surgeons with a special interest in chests should be examined for mycobacteria and records kept of the specimens on which we did this without being asked to. In the following three years we examined just under 1500 such specimens. None of 966 sputa from hospitals or clinics yielded any mycobacteria. One out of 502 from general practitioners yielded *Mycobacterium tuberculosis* on culture.

I hope this fragment of evidence may contribute to our basing our precautions on current evidence rather than on hypotheses or on evidence from times when tuberculosis was a common and feared disease with no reliable treatment.

ALASTAIR WILSON
Bacteriology Laboratory, City Hospital, Greenbank Drive, Edinburgh EH10 5SB

Book reviews

Current Topics in Pathology. Vol 67. 'Carcinogenesis.' Ed E Grundmann. (Pp 259; illustrated; DM 96, US$ 52.80.) Springer. 1979.

This, the most recent volume in the series, consists of four contributions mainly concerned with experimental carcinogenesis. The first of these seeks to explain the genesis of gastric stump carcinoma in man by the use of rats subjected to gastric resection with and without the administration of a carcinogen. A detailed, well-illustrated, if somewhat diffuse article concludes that carcinoma will arise at the site of gastrointestinal anastomosis, given the lapse of a sufficient period of time, with resection alone, whereas the addition of a carcinogen will accelerate the neoplastic process. Suggestions are advanced for reducing the incidence of such tumours by careful surgical techniques.

The second chapter reports on the experimental induction and morphology of tumours of the small intestine with emphasis on electron microscopy and on histochemical and electrophoretic analysis of enzymes.

The third section is a lengthy detailed account of the development of urinary bladder cancer in rats. It reports histochemical and autoradiographic findings during induction of the tumours and examines the stages in malignant transformation of papillomas while a final section discusses tumour morphology and classification. The chapter benefits from a comprehensive bibliography and is recommended reading for those with an interest in bladder cancer.

A short review on the function of B-lymphocytes concludes the volume. Evidence that seeks to explain the contrasting roles of B-lymphocytes in rejection and in initiation and development of tumours is presented with reference to experimentally induced lesions in animals and to spontaneously occurring tumours in man. The volume is well produced and illustrated and its contents will be of general interest to those concerned with carcinogenesis, although it will be of particular value to those engaged in studies of alimentary and urinary tract neoplasia.

JM HAMILTON