Correspondence

Central nervous system involvement by Mycoplasma pneumoniae

I read the article by Fink et al with interest. I am surprised by their population study. This does not, except for a single case of Guillain-Barré syndrome, include patients with encephalitis, which is considered to be the main type of the central nervous system (CNS) involvement by Mycoplasma pneumoniae in children, 1,2 despite the fact that their subjects were mainly children. When discussing CNS involvement by M pneumoniae, particularly in children, encephalitis with encephalitis episodes are examined as well.

Recently, my research group studied CNS involvement by M pneumoniae using the polymerase chain reaction (PCR), 3 and found that patients with encephalitis, in whom onset of neurological symptoms occurred within seven days of the onset of fever, exhibited a significantly higher incidence of neurological DNA in cerebrospinal fluid (CSF) than patients with later onset of fever. 4 Fink et al stated that six of seven patients with confirmed M pneumoniae infection reported a febrile illness or upper respiratory tract infection six to 14 days before the onset of neurological symptoms. Our data suggest that this does not mean all, because those with their patients mycoplasma DNA may not be detectable in the CSF. We are of the opinion that the presence of mycoplasma DNA in CSF is not evidence of a direct, invasive mechanism. Nevertheless, the clinical characteristics of illnesses involving the CNS or other factors, such as the interval between the onset of fever and the occurrence of neurological symptoms, should be taken into account before a conclusion is reached whether or not a direct invasive mechanism plays a role in CNS involvement by M pneumoniae.

M NARITA
Department of Pediatrics,
Hokkaido University School of Medicine,
N 15 W 7 Kita-ku,
Sapporo 060, Japan


Dr Fink and Dr Narita comment:
We are pleased to note Dr Narita's interest in our paper. We have addressed the points that he has raised in chronological order for clarity.

Firstly, we agree that encephalitis is reported as the main CNS manifestation of M pneumoniae infection, but some reports show meningitis to be associated in the younger age groups. Although we have reported a range of clinical cases, we believe that most of the patients with clinical presentations suspected of being M pneumoniae infection in the hospitals surveyed would have been referred to us. We suspect that the patients we reported are a true reflection of the clinical presentation but numbers are too small for any definitive comment. All patients with encephalitis during the study period were referred to our laboratory.

Secondly, in Dr Narita's reported method of PCR for mycoplasma 5 we understand that the system developed for one species is not different from M genitalium from M pneumoniae. We believe that M genitalium is a more toxic organism than M pneumoniae. It may be that the two species have not been previously studied in previous studies, so linking a larger number of encephalitis presentations with mycoplasmal infection.

Thirdly, clinical onset of M pneumoniae infection is very difficult to recognize because of its insidious nature. In our series and in Dr Narita's series all of the patients had antibodies and this suggests that the patients had been infected for a long time before the onset of the primary symptoms. Fourthly, our simplified PCR method was developed to facilitate earlier clinical diagnosis and provide further opportunity for studying the natural history of Cushing's syndrome, 6 but a consistent S cerebrospinal fluid involvement was not proven to M antimodies. 7 Although other studies have suggested that M pneumoniae using the polymerase chain reaction (PCR) methods 3, 9-11 may be useful in detecting mycoplasmal infection, the PCR method is not yet widely used in patients with M pneumoniae pneumonia using the polymerase chain reaction (PCR) methods 3, 9-11 may be useful in detecting mycoplasmal infection, the PCR method is not yet widely used in patients with M pneumoniae pneumonia.


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This book provides a series of practical demonstrations, that may be undertaken by students themselves, to illustrate some of the fundamental concepts of genetics. It is aimed at first year undergraduates with questions and answers on each demonstration. The text and illustrations are self-explanatory. The authors find themselves in the curious position of having to defend the use of practical laboratory work in courses on genetics which they do clearly and succinctly.

The book was first published in 1951 and is now in its 10th edition and therefore clearly has a niche in this particular market. No doubt the book has evolved a great deal since the first edition but unfortunately some mutations have crept in over this period of time.

In the chapter on “Linkage and Crossing over” some of the following points are explained in detail in the section on human gene mapping. Other approaches (for example, in situ hybridisation) are dealt with in one line—surely unnecessary in a textbook published in 1995. In the chapter on “Human Chromosomes” the chromosome pairs 17 and 18 are transposed in one figure (Fig 11.3) and the ISCN karyotype for K 365 for 5q23.2 is incorrectly given as 47,XY, +X rather than 47,XXY. In the same chapter the cytogenetic consequences of the presence of the Philadelphia chromosome, observed in chronic myeloid leukaemia, are incorrectly described.

One is left with the impression that some parts of this book may have evolved faster than others. The book would appear to be an useful source for classic genetic experiments but care should be exercised in relying upon it as a source of instruction and information in those areas undergoing rapid development such as human gene mapping, which will benefit from revision for the next edition.


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It is less than further clarification.23 but among those about interest to those about interest to interest.

The book is a bargain.


This text is now in its second edition, despite the fact that PCR in situ hybridisation (PCR-ISH) is still in its infancy, probably reflecting rapidly growing interest in the technique. This is not surprising, as PCR-ISH offers the high sensitivity in signal detection afforded by PCR and yet permits the investigator to localise that signal architecturally.

For the novice, the first two chapters provide useful introductions to the relevant molecular biology, then the practical approach for PCR and ISH is discussed. At this point and subsequently the chapters include practical protocols to lead the reader through a range of techniques, with and without controls. Numerous photographic figures, some in colour, are used to illustrate examples of applications and results. It must be stated, however, that the quality of some of the photographs is not always optimal, many being rather grey. Perhaps the most useful chapter is that describing “start-up” protocols for the beginner. This part of the book, combined with the contents of the appendices, are most helpful to those brave enough to attempt this notoriously fickle methodology.

The author’s specialist interests are reflected by the inclusion of two chapters, one regarding the application of PCR-ISH to the detection of papilloma viruses, the other to the use of the method in the investigation of HIV related diseases.

Perhaps the greatest hope for the success of PCR-ISH is the use of reverse transcriptase methodology. This can eliminate problems of non-specificity in ISH caused by DNA repair. This is discussed clearly and practically in a further chapter.

In general, this is a well produced and organised volume and can be recommended to those about to step into this minefield of techniques and protocols. It is a creditable basis of interest to speculate as to how many laboratories will be applying PCR-ISH by the time a third edition of this book is published!

J CROCKER