Electronic laboratory reporting to general practitioners; is there ROM for improvement?

Electronics communications hardware, such as fax machines and modems, is becoming cheaper, more powerful, and easier to use. Complex systems, such as the Epinet Lablink Host System (Vidicode, Cheltenham), are already available to send laboratory reports to general practitioners' surgeries, but they are expensive for both parties and a network would have to be large to be viable. Alternatively, secure "electronic mailboxes" could now be used economically for temporary storage of medically scrutinised reports for GPs to interrogate only as required. This could be combined with a routine postal service.

To assess the attitudes and access of our laboratory's GP users to this equipment we carried out questionnaire surveys in 1988 and 1991. Prompted by recent publications we also included questions relevant to audit of our general laboratory communications, and we tested the existing postal service.

In June 1988 we posted a questionnaire to 40 practices in Cambridgeshire. We asked if they had a fax machine or whether they intended to acquire one in the near future, and explored their attitudes to electronic reporting. Twenty-six (65%) replies were received. No practice had a fax and only one thought they would acquire one, but only two (10%) were against the idea of electronic communications in principle. Concerns were about costs and access to the system, confidentiality, and the permanence of printing on fax paper.

In July 1991 we sent a questionnaire to 170 doctors in 50 practices in and around Cambridgeshire. This time we also asked for comments on the postal transmission of reports; the appropriateness of telephone contacts; the value of telephone our laboratory contacts; their thoughts on fax and electronic reporting; the adverse effects of postal systems; and whether practices intended to acquire any of this equipment.

Fifty-nine GP replies (35% response) from 42 practices (84%). All the questions were answered on every questionnaire, and several practices returned joined. Only three of 42 (7%) were dissatisfied with the postal service, 25 (60%) were satisfied, and 14 (33%) thought it good or excellent. No adverse comments were received about the telephone service, with our contacts being thought satisfactory by 47 of 51 (92%) and good or excellent by four (8%), and contacts originated by GPs satisfied by 33 of 50 (66%) and good or excellent by 17 (34%).

By mid-1992 about half the GPs expected to have access to a fax machine, nearly 80% to a modem. Only three (5%) were against any form of electronic reporting. GPs who did not have a PC tended to specify "hard copy" of all reports, whereas the more computer literate required hard copy only until an electronic system had been proved reliable. This group also gave most support for the ability to access a practice specific "electronic mailbox." Many were concerned about the security of any electronic system, but a number wondered if the post was really any safer.

In June 1991 we included pre-stamped, return-addressed postcards within report envelopes sent to surgical practices. Of 44 (90%) cards returned, all had been received within 24 hours. We intend to repeat this survey regularly.

Clearly, electronic communications apparatus is proliferating in surgeries, and this resource could be tapped to improve the quality of pathology reporting. Our surveys provided many morale-boosting responses, and highlighted a number of minor communication problems that we have attempted to remedy. Electronic mailboxes (together with a routine postal service) may be the most effective option at the moment, provided that laboratory processors were buffered from multiple on-line users, and that access to medical advice was preserved. Any new system will need high and proven reliability to surpass existing links. To quote one Cambridgeshire GP: "... all this could need a major change to our practice... but the electronic office cannot be delayed indefinitely!"


Acanthamoeba keratitis

The interesting case report by Anderson and his colleagues1 serves as a useful reminder to laboratory workers of the importance of bearing this unusual potential diagnosis in mind when investigating lesions of the eye, especially in wearers of soft contact lenses. This report raises some further points which may be helpful to those wishing to investigate such cases.

The authors are quite right in saying that acanthamoebas are relatively tolerant of osmolality: some free-living amoebae (FLA), especially Acanthamoeba spp, can readily be grown on a variety of media including non-nutrient water agar with a bacterial lawn, in mammalian tissue cultures, and some in axenic culture in complex media.2 Species vary, however, in their ability to grow in different media and even depending on the bacterial species used (Klebsiellas may be preferable as a pabulum). The morphological form of trophozoites and cysts may, in some species, vary with the growth conditions, especially salinity. Growth at different temperatures will also tend to select for different species or strains.

Samples may contain a variety of species, not all potentially pathogenic. FLAs are ubiquitous in the environment, and in addition to their occurrence as contaminants in tissue cultures, the cysts may be found in the air (as demonstrated by the same culture) and in tap water, both of which may provide a potential source of contamination for cultures as well as lenses and lens fluids.1 The isolation of FLAs from such samples as lens fluid does not necessarily imply an aetiological role. Laboratory cultivation, therefore, needs to be performed, and interpreted with great caution, as definitive identification is a specialised task.

In addition to their role in the natural history of legionellosis, FLAs include species potentially capable of causing serious central nervous system infections. They should, therefore, be handled according to the recommendations of the Advisory Committee on Dangerous Pathogens.3 Species of FLA differ in their sensitivity to a variety of potential therapy compounds: results of tests by different authors have sometimes been conflicting and clinical response has often been disappointing. Propamidine (not Propanidine) isethionate, and hydroxyethylamidine isethionate have previously been shown to be effective against strains of Acanthamoeba as trophozoites, but cysts are considerably more resistant.4-6 In vitro studies on isolates, in a specialised laboratory, might be indicated to confirm identity, but drug susceptibility tests are not generally available. The Ameobiasis Unit will, on request, post medium to microbiologists wishing to attempt isolation, and will identify isolates and examine histological material.

The potential for environmental contamination also, of course underlines the need for great care in handling contact lenses and lens solutions, by those wearing them.7,8

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Urease activity of Helicobacter pylori

Concerning the recently published paper in the Journal,1 several authors have previously used acetylcytohydric acid as a specific urease inhibitor. Indeed, Helicobacter pylori was established as a potent and specific urease inhibitor 30 years ago in our paper.2 Subsequently many other papers on the inhibitory effect of hydroxycyamid acid on urease activity of various origins and on the therapeutic application of hydroxycyamid acids have been published. The authors of the