

a rather cheaper method of reducing the non-operation rate than the increase in consultant numbers they suggest.

P M J SCOTT
G OWEN
P G BICKNELL

Department of Otolaryngology,
Bristol Royal Infirmary,
Bristol BS2 8HW

1 Morrissey S, Alun-Jones T, Leighton S. Why are operations cancelled? *Br Med J* 1989;299:778. (23 September.)

Mothers with HIV

SIR,—The recent editorial by Dr Caroline Bradbeer was a useful addition to the complex HIV jigsaw puzzle.¹ Her penultimate paragraph, however, was understandably written from the perspective of an expert in genitourinary medicine.

In fact, breast milk in less technically developed countries is virtually necessary for survival, but not only because “maternal antibodies are important in preventing neonatal infection.” Breast milk is also needed to satisfy biological nutritional needs, to avoid the tremendous dangers of alternatives (contaminated, highly diluted, and completely unaffordable bottlefeeds), and to avoid the decline in lactation amenorrhoea with its effects on spacing of children and negative impact on over rapid population growth. Minuscule potential risks are outweighed by definite, proved, positive benefits.

DERRICK B JELLIFFE
E F PATRICE JELLIFFE

Division of Population and Family Health,
University of California, Los Angeles,
Los Angeles, California 90024-1772,
United States

1 Bradbeer C. Mothers with HIV. *Br Med J* 1989;299:806-7. (30 September.)

Myalgic encephalomyelitis: postviral fatigue and the heart

SIR,—The controversial subject of myalgic encephalomyelitis has surfaced once more,¹ and I would like to contribute to the debate about its viral origins.

Persistent virus infections impair the specialised functions of cells. These include the synthesis of specific products such as heavy and light myosin chains, melanin, hormones, and immune functions.² Evidence of persistent enterovirus infection has been found in both dilated cardiomyopathy,^{3,5} an organic disease discussed at a recent symposium,³ and the more controversial myalgic encephalomyelitis.^{6,7}

In murine myocarditis induced by Coxsackie viruses, more severe and lasting disease is associated with immunopathological processes, which include virus specific, cross reactive, and autoimmune reactions.^{8,9} In Coxsackie viral myocarditis and cardiomyopathy of humans the antibodies that cross react with Coxsackie B antigens are reported.³ Serum samples from patients with cardiomyopathy may react with cardiac β adrenoreceptors, with mitochondrial ADP/ATP carriers, and with cell surface protein of the calcium channel causing calcium overload of myocytes and consequent dysfunction.³ Thus a complex pattern of pathogenic mechanisms is emerging to explain dilated cardiomyopathy, which was formerly considered to be idiopathic but is now recognised as a late sequel of a proportion of cardiac infections with certain enteroviruses, particularly those of the Coxsackie B group. This does not exclude the possible role of other viruses—for example, arboviruses where these are prevalent—as initiators of such pathogenic processes.

It seems likely that similar immunological and

metabolic disturbances in myalgic encephalomyelitis may also result from chronic infection, usually with enteroviruses, providing the organic basis of the postviral fatigue syndrome.¹⁰ This condition is characterised by severe fatiguability and recuperation through rest. The myocardium, however, cannot rest—except terminally. Does “postviral dilated cardiomyopathy” represent the result of postviral fatigue syndrome of the unresting heart?

NORMAN R GRIST

Communicable Diseases (Scotland) Unit,
Ruchill Hospital, Glasgow G20 9NB

- Harris F, Taitz LS. Damaging diagnoses of myalgic encephalitis in children. *Br Med J* 1989;299:790. (23 September.)
- Southern P, Oldstone MBA. Medical consequences of persistent viral infection. *N Engl J Med* 1986;314:359-67.
- Schultheiss HP, ed. *New concepts in viral heart disease*. Berlin: Springer, 1988.
- Bowles NE, Richardson PJ, Olsen EGJ, Archard LC. Detection of Coxsackie-B-virus-specific RNA sequences in myocardial biopsy samples from patients with myocarditis and dilated cardiomyopathy. *Lancet* 1986;ii:1120-3.
- Kandolf R, Kirschner P, Amies D, et al. Enteroviral heart disease: diagnosis by in situ hybridization. In: Schultheiss HP, ed. *New concepts in viral heart disease*. Berlin: Springer, 1988:337-48.
- Yousef GE, Mann GF, Smith DG, et al. Chronic enterovirus infection in patients with postviral fatigue syndrome. *Lancet* 1988;ii:146-50.
- Archard LC, Bowles NE, Behan PO, Bell EJ, Doyle D. Postviral fatigue syndrome: persistence of enterovirus RNA in muscle and elevated creatine kinase. *J R Soc Med* 1988;81:326-9.
- Huber SA. The role of immune mechanisms in pathogenesis. In: Bendinelli M, Friedman H, eds. *Coxsackieviruses, a general update*. New York: Plenum, 1988:103-16.
- Beisel KW, Rose NR. Relationship of coxsackievirus to cardiac autoimmunity. In: Bendinelli M, Friedmann H, eds. *Coxsackieviruses, a general update*. New York: Plenum, 1988:271-92.
- Behan PO, Behan WMH, Bell EJ. The post-viral fatigue syndrome—an analysis of the findings in 50 cases. *J Infect* 1985;10:211-22.

Mumps, measles, and rubella vaccination and encephalitis

SIR,—The report by Dr Suzanne Crowley and colleagues noted that the calculated rate of mumps encephalitis temporally associated with mumps, measles, and rubella vaccine in the United Kingdom may be as high as one per 100 000 vaccinations and contrasted this finding with the much lower rate of encephalitis associated with mumps immunisation in Finland and the United States.¹ The authors noted that “the time interval between observation of neurological symptoms and immunisation was not stated” in the Finnish and American reports, implying that this could account for the difference in rates.

Another more likely reason is the difference in strains of mumps virus in the vaccine used in the three countries. The United States and Finland have used the Jeryl-Lynn strain of mumps vaccine exclusively, whereas in the United Kingdom other strains have also been widely used, notably the Urabe Am 9 strain. Clusters of cases of mumps meningoencephalitis appeared in people receiving vaccine containing the Urabe strain soon after introduction of this vaccine in both Canada and the United Kingdom.^{2,7} In contrast, such cases have been extraordinarily rare where vaccine containing the Jeryl-Lynn strain is in use, despite the fact that many millions more doses of this vaccine have been administered. Another finding consistent with a strain related difference in central nervous system reactions is that rates of central nervous system reactions of one per 70 000 to 200 000 vaccinations have been reported for vaccine containing the Urabe strain,² and children receiving this vaccine were 13.2 times more likely to have been admitted for proved mumps meningitis in the ensuing four weeks than at other times.³ The comparable rate of central nervous system reactions after vaccination with the Jeryl-Lynn mumps vaccine strain in the United States is one per 1.8 million (unpublished data; Merck Sharp and Dohme, Pennsylvania).

In monitoring the incidence of such adverse experiences it is important to recognise that not all measles, mumps, and rubella vaccines are the same. Doctors reporting adverse experiences should note not only the time interval between symptoms and immunisation but also the specific vaccine used.

DAVID R NALIN

Merck Sharp and Dohme Research Laboratories,
West Point, Pennsylvania 19486,
United States

- Crowley S, Al-Jawad ST, Kovar JZ. Mumps, measles, and rubella vaccination and encephalitis. *Br Med J* 1989;299:660. (9 September.)
- Furesz J, Hockin JC. A case of mumps meningitis: a post-immunization complication? *Canada Diseases Weekly Report* 1987 September 5;13-35:155-7.
- Hockin JC, Furesz J. Mumps meningitis, possibly vaccine-related—Ontario. *Canada Disease Weekly Report* 1988 November 19;14-46:209-11.
- Gray JA, Burns SM. Mumps meningitis following measles, mumps and rubella immunization. *Lancet* 1989;ii:98.
- von Muhlen Dahl KE. Mumps meningitis following measles, mumps, and rubella immunization. *Lancet* 1989;ii:394.
- Thomas E. A case of mumps meningitis: a complication of vaccination? *Can Med Assoc J* 1988;138:135.
- Egulluz GC, Trallero EP. Mumps meningitis following measles, mumps and rubella immunization. *Lancet* 1989;ii:394.

Interstitial laser hyperthermia

SIR,—We think that Dr H M Sweetland and colleagues¹ are confused over the terminology in our paper on interstitial laser hyperthermia.² The tissue temperature is maximum immediately adjacent to the tip of the laser fibre and falls with increasing distance from the fibre. Certainly, we showed temperatures up to 100°C close to the fibre tip, and even greater temperatures as charring occurred, but at the most distant point in the tissue where biological changes were produced the temperature was in the range of “conventional” hyperthermia. We were not trying selectively to damage malignant tissue by heating it to a uniform temperature in the range 42.5-45°C. That would be impossible with any interstitial approach to delivering the heat, such as with our bare fibre or Dr Sweetland and colleagues’ sapphire probe. Our selectivity arises because the tumour is heated to a higher temperature than the normal regions.

We agree that some modification to the fibre tip may make it possible to use a higher laser power without charring but think that sapphire tips are unlikely to be the best solution. We showed that the diameter of necrosis that can be produced in liver around a sapphire probe is less than that around a bare fibre for equivalent laser powers and exposure times.³ A third to a half of the laser energy went into heating the metal connector and sapphire assembly, so the probe was acting much more as a “hot tip” than the bare fibre does. In addition, the width of sapphire tips and the metal collar required to connect them to the laser fibre make them impractical for percutaneous use.

Dr Sweetland and colleagues report tissue temperatures of 42-44°C 5 mm away from their probe. This implies major variations in the likely tissue effect. At 42°C little effect would be expected in normal or tumour tissue, so it is perhaps not surprising that they have had difficulty producing necrosis, although no measurements are given.

We agree that many more experimental and clinical studies are required to establish the true clinical potential of this technique, and one of the major concerns is the fibre tip, although sapphire tips seem unlikely to represent a useful advance for percutaneous treatment. The concept of interstitial laser hyperthermia, however, is simple and attractive. The treatment times are much shorter than with conventional hyperthermia with modalities such as microwaves, and the extent of tissue necrosis is more predictable and can be monitored in real time by ultrasonography. If carefully developed and evaluated we believe

this new approach has considerable potential in treating tumours of solid organs.

A C STEGER W R LEES
A MASTERS K WALMSLEY
S G BOWN

National Medical Laser Centre,
University College and Middlesex School of Medicine,
London WC1E 6JJ

- 1 Sweetland HM, Wyman A, Rogers K. Interstitial laser hyperthermia. *Br Med J* 1989;299:918. (7 October.)
- 2 Steger AC, Lees WR, Walmsley K, Bown SG. Interstitial laser hyperthermia: a new approach to local destruction of tumours. *Br Med J* 1989;299:362-5. (5 August.)
- 3 Van Eeden PJ, Steger AC, Bown SG. Fibre tip considerations for low power laser interstitial hyperthermia. *Lasers in Medicine and Science* 1988 July;A336.

Immunisation: failure and success

SIR,—Surely one of the major tactics for success in an immunisation programme has to be the active participation by nurses, although Dr A Nicoll and his colleagues seem to be limiting their role to specific aspects.¹

Saskatoon is a large city in the province of Saskatchewan in Canada and has a very similar health care system. It has an annual average of 3500 births and achieves in excess of 90% childhood immunisation rates. Interestingly, the programme is delivered by nurses alone. After birth has been notified to the medical health officer of the city council a community nurse visits the mother and the baby at home. Often this is the nurse who has taken part in the antenatal care of the pregnant mother. During the visit advice on immunisation programme is given, and the family is invited to attend the nearest community health centre (there are four in Saskatoon). The parents are given information booklets on immunisation to read while waiting in the clinic. The immunisation is given by the nurse after obtaining answers to a simple questionnaire on various aspects of immunisation including any contraindication. Although no doctor is present at the clinic, the medical health officer or his deputy is always available by telephone for advice if needed. The nurses, who also follow up the non-attenders, have received eight weeks of in house training before being allowed to immunise independently. They also regularly attend updating programmes.

The parents are happy for their children to be immunised by nurses and feel that immunisation is an integral part of child rearing. The two hundred or so family doctors (who do not normally undertake any immunisation at all) are also satisfied by this practice and perceive this to be an appropriate method for the delivery of the immunisation programme.

I believe that the solution to the problem of very low uptake of immunisation in many health districts in Britain is to devise a system whereby the health visitors undertake routine immunisation both in health clinics and in domiciliary settings.

R S RAMAIAH

South Tees Health District,
Poole Hospital,
Middlesbrough TS7 0NH

- 1 Nicoll A, Elliman D, Begg NT. Immunisation: causes of failure and strategies and tactics for success. *Br Med J* 1989;299: 808-12. (30 September.)

Communicating with Asian patients

SIR,—Ms Kathryn A Stevens and Dr R F Fletcher raise some interesting points, particularly in respect of using interpreters.¹ We have a large Bengali population around The London Hospital

and the use of interpreters can be most helpful, but from personal experience I disagree that “an interpreter who is familiar with medical . . . words is more helpful.” There are cases when an interpreter feels that it would be helpful to diagnose “heart failure” for the doctor rather than relay the symptoms of shortness of breath that may have been vividly and accurately described by the patient.

Further, a simple question directed at the patient through the interpreter often results in a long two way conversation between the patient and the interpreter; the doctor, having waited patiently, is finally given a monosyllabic reply. These “Chinese whispers” are ominous and one often wonders what vital clues have been covered over by the interpreter during the two way dialogue: the interpreter thinks that he knows best—that is, to edit what he considers to be unnecessary information. For the same reasons I do not consider a relative of the patient to be of any help.

The most useful interpreters are those found in nearby cubicles or beds; they are totally unrelated to the patient and can be objective. They will translate the words of the patient rather than communicate the perceived diagnosis.

PANKAJ SHARMA

Accident and Emergency Department,
The London Hospital,
London E1 1BB

- 1 Stevens KA, Fletcher RF. Communicating with Asian patients. *Br Med J* 1989;299:905-6. (7 October.)

SIR,—Though I agree with the findings of Ms Kathryn A Stevens and Dr R F Fletcher,¹ I was surprised at their suggestion that we recommended written teaching materials in Asian languages in our paper on this subject published 10 years ago.² This is entirely incorrect; what we recommended was that teaching materials should not be provided in Asian languages because of the high illiteracy rate in our survey. Furthermore, we recommended visual aids—for example, video or film in Asian languages—as the preferred method of communication, a suggestion that is reiterated in the recent paper.

B A LEATHERDALE

Royal South Hants Hospital,
Southampton SO9 4PE

- 1 Stevens KA, Fletcher RF. Communicating with Asian patients. *Br Med J* 1989;299:905-6. (7 October.)
- 2 Leatherdale BA, Jhittay P, Gill A. Communication with Asian diabetics. *Br Med J* 1978;ii:1197-8.

SIR,—We agree with Ms Kathryn A Stevens and Dr R F Fletcher about the need to communicate with “Asian” patients¹ but disagree with the proposed method of using written material in an Asian language as a means of communication. We feel that this proposal attempts to oversimplify a complex problem in that mass produced written material must make broad generalisations with regard to its content and may be only poorly applied to individual circumstances. Ms Stevens’s and Dr Fletcher’s survey itself indicates that such material may be of use to only a third of such patients and this third must then be further subdivided to take into account different Asian languages—for an uncertain benefit.

In South Tees Health District we have found that if people of Asian ethnic origin are literate then they almost always are so in English. We suspect that our district is not at all unusual in this respect. And if we cannot be sure that English speaking people take the trouble to read through handed out information leaflets then why should we expect people whose first language is other than English to behave any differently?

Ensuring that non-English speaking patients understand instructions with regard to their health care requires the use of properly trained inter-

preters who are able to relate to the needs of the patient. We believe that alternative methods using mass communication that prevent discussion between health care worker and patient are almost totally ineffective and a waste of resources.

IAN HOLTBY
R S RAMAIAH

South Tees Health District,
Poole Hospital,
Middlesbrough TS7 0NH

- 1 Stevens KA, Fletcher RF. Communicating with Asian patients. *Br Med J* 1989;299:905-6. (7 October.)

Ethnic differences in consultation rates

SIR,—The papers by Dr S J Gillam and colleagues¹ and Dr R Balarajan and colleagues² do not get to the heart of the question. We spend much effort trying to separate out all the minutiae of ethnic differences—yet we lump Asians as one group.

The Asian subcontinent has a population of 550 million (1971), yet we classify people from the Republic of Ireland (population 2.97 million (1971)) as a significant group. We will not separate out ethnic differences until we separate out our Asian groupings. The Moslem, Katchi speaking Asians born in Malawi whom I see present different problems from the Hindu, Gujarati speaking Asians born in east Africa who are seen by my colleagues one kilometre away. The health of an Asian of lowly Moslem origins will be different from that of one of Hindu Brahmin origins—they have such a different genetic make up. So future work must accurately identify Asian subgroups. Also, Asians’ place of birth and education have an influence, as does their social classification. Here again I wonder if our social classes can be applied to patients from the Asian subcontinent. Asian people are grouped more often by caste or religion, whereas we classify by the occupation of the head of household.

Did we learn nothing from the influx from Ireland after 1846 and the European displaced people in 1946-8? Surely the lessons learnt then could be applied now to the similar large groups of people with differing racial, religious, and cultural backgrounds.

S M F FRASER

Leicester LE2 0AS

- 1 Gillam SJ, Jarman B, White P, Law R. Ethnic differences in consultation rates in urban general practice. *Br Med J* 1989;299:953-7. (14 October.)
- 2 Balarajan R, Yuen P, Raleigh VS. Ethnic differences in general practitioner consultations. *Br Med J* 1989;299:958-60. (14 October.)

Application of airline pilots’ hours to junior doctors

SIR,—The article by Drs A Murray Wilson and G Weston was a good attempt to apply the regulations of one stressful profession to another. It is understandable, however, that it will not be closely applicable and Messrs David R McCoy and Brian Kennedy point out the obvious in their letters.^{2,3} I would not accept that back up from another member of the team at home was of comparable safety to having two people in the cockpit, nor indeed as safe as limiting the hours of continuous work.

Dr John A T Duncan reminds us that “achieving a balance” brings long hours closer to the consultant staff and, for example, a major elective case could follow a night of dealing with emergencies. In Telford, where we have a “Short report” level of staffing, we have separated orthopaedics from traumatology and are exclusively dedicated to traumatology for one week in three, during which the consultant is available at all times to deal with trauma and sees every admission. Orthopaedic