

Correspondence

Hospital infection control

With reference to the correspondence entitled 'Hospital infection control committee' in your *Journal*, while agreeing broadly with Richard and Chandy, we would like to submit that the composition and functioning of a committee as proposed by the authors, would prove rather unwieldy and ineffective, given the existing state of our health care system both in the governmental and unorganized private sector.

Currently, nosocomial transmission of any organism in any country is unacceptable and underscores deficiencies in existing medical practices. The potential for patient-to-patient nosocomial infection has been referred to as a 'lurking epidemic'.²

Contributing to the generally prevalent chaotic state of functioning are: patient overload which overburdens the infrastructure; inadequate orientation of most medical personnel towards nosocomial infection control; and the relative lack of training and educational attainment of the paramedical staff. In such a situation, with no formal surveillance system in place and a relative lack of accountability, nosocomial infections may be rampant and unrecognized.

Recognizing the threat posed by the human immunodeficiency virus and hepatitis B and C virus infections in hospital settings, the National AIDS Control Organization (NACO) has evolved a consensus strategy and produced it in the form of a manual, with clearly delineated *standard operative procedures*. They have asked for the setting up of various groups, such as the Infection Control Team, the Infection Control Committee, and also proposed that one post each of an Infection Control Officer and Infection Control Nurse should be set up.³

With the increasing role of epidemiology in this newly re-discovered field of hospital infection control, a specialist in preventive medicine and public health would be suited for the post of an Infection Control Officer in a large hospital. Laboratory methodologies and epidemiology are synergistic tools for the public health practitioner. Epidemiology provides the information required for making decisions and recommendations for disease prevention and control, while the laboratory provides data for confirming and improving the understanding of epidemiological findings. Preventive measures by health practitioners are of great importance and could have a complementary and positive impact on infection control and nosocomial transmission.

In 1997, Pawa *et al.* expressed the need for nosocomial infection surveillance systems using uniform definitions and reporting formats to generate valuable information that could be utilized for formulation of appropriate preventive strategies.⁴ The Hospital Infection Control Committee would benefit from the expertise of a Public Health Practitioner in surveillance and monitoring systems, as also operations research and programme management.

Infection Control Practitioners (ICP) in the West are usually registered nurses but may also be microbiologists, epidemiologists, or medical technologists. Infection Control Practitioners collect and interpret data, identify problems and implement interventions to prevent infections and improve patient safety. It has been recommended that hospitals should have at least one full-time ICP for every 250 occupied hospital beds.⁵

In Thailand, Pannarunothai reported that most hospitals have infection control committees, with full-time/part-time infection control nurses. However, insufficient allocation of manpower and resources have prevented effective nosocomial infection control.⁶

Therefore health administrators, bureaucrats, politicians, the medical fraternity as well as the general public have to be made aware of the potentially grave complications of neglect in the field of nosocomial infection control, through appropriate awareness creation strategies. Whole-hearted commitment, allocation of required funds and support to the programme is essential to prevent the problem from getting out of hand.

The medical fraternity, especially those in public health, need to be more proactive in tackling the situation, to ensure effective and efficient health care to the individual and the community at a cost affordable to the nation.

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A case of triple retroviral infection with HIV-1 (Genotype C3), HIV-2 and HTLV-I

There are reports of dual infection with human immunodeficiency virus (HIV-1) and human T lymphotropic virus-I (HTLV-I).^{1,2} Infection with three retroviruses (HIV-1, HIV-2 and HTLV-I) has been previously reported from outside India.³ To the best of our knowledge, this is the first such report from the Indian subcontinent.

A 32-year-old married lorry driver, resident of Tamil Nadu, India, was seen in November 1998 for a non-united fracture of the shaft of the left femur sustained 6 months earlier. As part of preoperative screening his blood sample (with consent) was tested for HIV antibody. His serum was found reactive to HIV by two different enzyme immunoassays (EIA) and was positive for HIV-1 and HIV-2 by immunoblot testing. The sample was also found to contain HTLV-I antibody by a particle agglutination test (titre of 1024), which was confirmed by an immunoblot.

The individual gave a history of a road traffic accident in West Bengal in April 1998. He regained consciousness 3 days later in a local hospital, but had no knowledge of a blood transfusion. The patient subsequently had the fracture set in a cast. He denied any

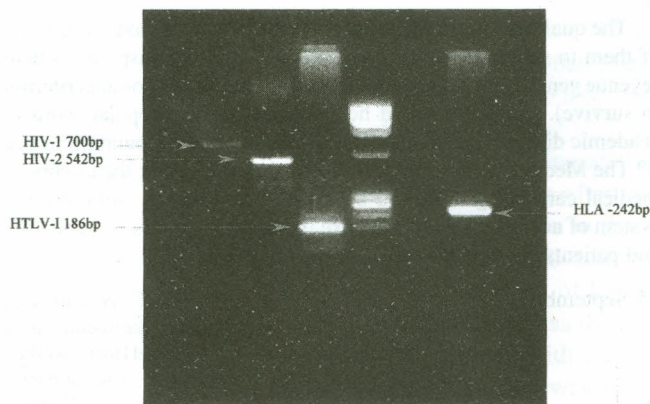


FIG 1. Gel picture showing specific bands for HIV-1 (700 bp), HIV-2 (542 bp) and HTLV-I (186 bp). Lanes 1, 2 and 3 show bands specific for HIV-1, HIV-2 and HTLV-I, respectively. Lane 4 is the molecular weight marker (Marker IX, Boehringer Mannheim, GmbH, Germany) and lane 5 is the distilled water PCR control. Lane 6 shows the band with HLA primers.

history of high-risk behaviour related to transmission of HIV. The patient did not have any symptoms related to HIV infection at the time of testing.

In July 1999, 10 ml of blood was collected and peripheral blood mononuclear cells (PBMC) were used for DNA extraction. HIV-1 nested polymerase chain reaction (PCR) was done using primers specific for 'env' region (700 bp product) and heteroduplex mobility analysis (HMA) was performed as previously described.⁴ The strain was identified as C3, the prevalent genotype in India. HIV-2 detection was done by a nested PCR for 'env'-specific sequence (542 bp product).⁵ HTLV detection was achieved in a single-round PCR with two different sets of primers—SK110, SK111 for the 'pol' region and SK43, SK44 for the 'tax' region.⁶ Bands specific for HIV-1, HIV-2 'env' and HTLV 'pol' gene were observed (Fig. 1).

In July 1999, his CD4, CD8 counts, and ratio were 572 and 1366 per μ l, and 0.42, respectively (Capcellia, Sanofi Diagnostic Pasteur, France). His CD4 count was low and the ratio had reversed.⁷

Accepting the history of absence of any risk behaviour for HIV infection, we speculate that the blood transfusion he had received may be a possible mode of infection. HIV-1, HIV-2 infections and dual infections have been reported in West Bengal earlier, especially in samples tested from a blood bank.⁸ In one study, evidence of HTLV-I was not detected in West Bengal.⁹ The patient could have been infected earlier with HTLV-I, vertical and horizontal spread of which has been recorded in Tamil Nadu.^{10,11}

It is of interest that the individual did not report any HIV prodromal illness, though he had probably acquired HIV-1 and HIV-2 simultaneously. Despite being infected by three retroviruses, the individual did not develop any overt clinical illness related to HIV in the 15-month period, though his lymphocyte phenotype counts and ratio showed immunosuppression. It is important to follow up such individuals to study the pathogenesis of these rare triple retroviral infections.

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Medical practice in private and government hospitals: Is there accountability?

Dr Mani's article 'How About An Ounce of Prevention'¹ was very thought-provoking. I agree with most of his remarks. The article highlights the perpetual conflict regarding medical care in government institutions versus that in private ones. This subject has also been debated in the lay press² where people have commented on the good and bad points of both. Some reports,³ however, have been very critical of private hospitals stating that there is: (i) a tendency to focus on the financial aspects of practice, (ii) an absence of full-time specialists, (iii) a penchant to over-test and over-medicate, (iv) a lack of co-ordination between visiting doctors, and (v) preference for more expensive procedures.

On the other hand, government hospitals will boast of academically superior staff that has little time for patients and is too poorly equipped to provide good service. The media² laments that sadly, both government and private hospitals sorely lack accountability. The choice seems to be between the devil and the deep sea. Except for a few well-known hospitals such as the All India Institute of Medical Sciences and the like, other government hospitals grossly lack even in basic infrastructure. Therefore, the patient is forced to turn to private hospitals and clinics where expensive diagnostic procedures are advised even if they are unnecessary. Someone has aptly summed this up by saying 'it is more dangerous to be rich in India and fall ill, because the rich in this country are over-diagnosed, over-investigated, over-medicated and over-surgicalized'. The middle class who try to emulate the rich are consequently pauperized.³ A recent report says

that in India, more than half the hospitals do not have a mechanism for managing complaints from patients or relatives. Patients find it impossible to prove negligence because doctors will not testify against each other.⁴

From the doctor's point of view, I feel an individual doctor's response in both situations would depend on what motivates him to work. Doctors who want to serve humanity through a 'noble profession' are rarely found and seem to be gradually becoming extinct. Today doctors are mostly trained in government institutions where they love to work in the early part of their career to hone their skills. The skilful specialists will move to a private set-up if money is the main motivating factor, and some of them will not mind taking advantage of gray areas in medical ethics. Many continue to work in ill-equipped government hospitals, possibly because (i) they enjoy teaching and are still stuck to the (?dying) ideals of the 'noble profession', (ii) they feel insecure about their skills to practice independently, (iii) the motivating force is social status or rank, which he/she gets by looking after VIPs (whether it is medically indicated or not) and, finally (iv) those who are motivated by money, have sidled themselves into positions where they are in charge of all hospital procurements.

The quality of medical care provided is not a criterion for any one of them to survive except in the setting of private hospitals (where revenue generated for the hospital may be the more important criterion to survive). 'Evidence-based health practice' is a popular word in academic discussions, but how many doctors in this country practice it? The Medical Council of India is supposed to check the quality of medical care being delivered by doctors. It needs to enforce some system of accountability, otherwise in future, one fears most doctors and patients would be meeting mainly in courts.

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