News from here and there

A vaccine for Alzheimer's disease?

The World Alzheimer's Congress 2000, the first meeting of Alzheimer's Disease (AD) researchers, physicians and other experts from around the world, concluded in Washington, D.C. in July 2000. Among the various scientific presentations, the initial results of the Phase I clinical trials of a potential vaccine for AD caught the attention of the media and the medical community.

Scientists from Elan Pharmaceuticals, USA, first reported their findings with animal studies in 1999 (*Nature* 1999;**400:**173–7, Schenk *et al*). The 42 amino acid form of amyloid beta peptide (Abeta42) is the predominant constituent of amyloid plaques in AD. In animal studies, transgenic mice (which overexpress mutant human amyloid precursor protein and progressively develop the neuropathological hallmarks of AD) were immunized with multiple doses of Abeta42, either at 6 weeks (before plaque formation) or at 11 months (after plaque formation). The younger mice showed prevention of plaque formation, neuritic dystrophy and astrogliosis, and the older mice showed significant reduction in the burden of Abeta42. Both groups had controls. An increased clearance of plaques by antibodies and microglial cells is proposed as the mechanism for prevention/reduction of plaques of AD.

Elan Pharmaceuticals announced that it has started multi-dose human Phase I clinical trials of 'AN1792', the synthetic Abeta42, with a projected total of 100 patients in the USA and UK. Patients in the USA have received a single dose by injection and the scientists report that no safety concerns have been identified so far.

Very little is definitively known about the pathogenesis, prevention, treatment and cure of AD. The amyloid cascade hypothesis maintains that amyloid plaque formation is the central process in the pathogenesis of AD. Other views argue that this is only an incidental finding. The critical question is 'Does prevention of plaque formation result in prevention of neuronal damage and translate into prevention of cognitive and behavioural symptoms of AD?' This exciting research by Schenk *et al.* will take us closer to the answer. More about the Congress can be found at www.alzheimer2000.org.

MUGDHA THAKUR, *Durham, NC, USA*

Modern day leeches

The depths to which a perverted human mind, driven by greed and lust for money can sink to, is evident from the news about an enterprising gang of confidence tricksters trading in human blood. Their modus operandi is unique and diabolical. Posing variously as the 'PRO of the AIDS Control Project' or as representatives of the 'Megacity Health and Voluntary Services', a group of conmen has been approaching several educational institutions in and around Hyderabad, Adilabad, Nizamabad, Khammam and many other districts in Andhra Pradesh for organizing blood 'testing' camps. The charade begins with emotional speeches highlighting how AIDS is transmitted not only by sexual contact but also by blood transfusion, the barber's blade, unsterile needles, etc. They then convince the students to undergo blood 'tests' and collect about 200 ml of blood from men and 150 ml of blood from women for 'testing' purposes. Furthermore, several ingenious schemes such as insurance coverage, scholarship scheme for higher education ('offered by WHO'!) are offered to the donors to 'motivate' them to get their blood 'tested'. Blood grouping is allegedly done at the site of blood collection. The students are then informed that the blood thus collected is being transported to a leading government hospital at Hyderabad for performing 'expensive tests' including HIV, HbsAg and VDRL. While it is not yet established as to what exactly happens next, blood thus collected is allegedly 'sold' clandestinely to several private clinics and hospitals. It has been estimated that nearly 16 000 students from more than 200 colleges have been duped in this fashion. An inquiry is in progress to ascertain the details of this racket.

The pathetic state of blood banking services, especially in remote areas, and the taboos associated with voluntary blood donation seriously affect the quality of blood banking services in India. Caution is required before embarking upon conducting ceremonial 'blood donation' campaigns. If this precious resource falls into the wrong hands, we may be facing a 'blood bomb' loaded with microbes.

ALLADI MOHAN, *Tirupati*

Collapsing hospital system—literally ! . . .

The collapse of a part of the floor of the thoracic ward into an empty ward below, of the Government General Hospital, Chennai (attached to Madras Medical College) on 20 August 2000, is a grim reminder of the severe deterioration in the government health services. One patient was killed, and nine others, including seven patients and two doctors, were injured. Typically, the government tried to play down the incident saying that the patient was critically ill. The point, however, is how this hospital, which was once the premier institution in South India, has been allowed to come to this sorry state. With the establishment of corporate hospitals, politicians and bureaucrats no longer utilize government medical services and hence the quality of these services is of no interest to them. On the other hand, successive governments have been remarkably liberal in giving concessions to corporate hospitals. Indeed, one could say that the public is subsidizing these corporate hospitals. Unfortunately, the poor and marginalized, the only ones who use government hospitals have no way to seek accountability from their elected representatives.

. . . . but a silver lining in the same state

Disposal of biomedical waste in Tamil Nadu has been largely an ad hoc affair. Most government hospitals have incinerators, but the mandatory segregation of waste is rarely done. Most private hospitals have no waste disposal systems at all and depend on the local conservancy staff, this by itself being an illegal practice. It is not unusual to see hospital waste, including sharps, in public dumping grounds. Sheilarani Chunkath, the new proactive chairperson of the Tamil Nadu Pollution Control Board, has announced that she will not permit this state of affairs to continue. She has served notices on hospitals requiring them to fulfil the waste disposal guidelines or face action.

The association of private hospitals in Chennai is lobbying the Tamil Nadu government for time and also for concessions. They have asked the government to put up a disposal unit. There is no doubt that urgent action is needed to dispose of hospital waste in

a safe manner. It remains to be seen whether the government will permit this officer to enforce the rules in a systematic and sustained manner or whether this effort will turn out to be a nine-day wonder.

THOMAS GEORGE, *Chennai*

Medical education in Mangalore

Three new medical colleges have recently emerged in the small coastal town of Mangalore, Karnataka. Some doubts have been raised about the threat they might pose to the standard of medical education here. However, all the colleges have been trying to allay such apprehensions. While K.S. Hegde Medical Academy has a good infrastructure and has been organizing many academic programmes, Yenepoya Medical College has one of the most modern hospitals with state-of-the art equipment and Fr Muller's Charitable Hospital boasts of one of the oldest hospitals in this part of the country and has abundant clinical teaching material.

Meanwhile, Kasturba Medical College has recently adopted an innovative way for conducting examinations, the Objective Structured Practical and Clinical Examinations. In this, students taking the pathology and internal medicine examinations are assessed in skills inclusive of cognitive, psychomotor and problem-solving ability as well as their ability to interpret data and correlate things. This objective approach is proving to be student-friendly, less time consuming and less strenuous.

C. V. RAGHUVEER, *Mangalore*

Changing pattern of undergraduate medical education in the UK

The structure of undergraduate teaching in the UK has seen a major change in the past few years. Concerns were raised that students were overwhelmed with information and may not give sufficient attention to the more important aspects of the subject. Also, the system of examination was such that rare diseases were overemphasized.

In 1992–93, the General Medical Council (GMC), which is responsible for the standards of medical education, decreed that the pattern be changed. The new system takes an integrated approach towards learning. In each field, core topics are identified and are presented as problem cases (problem-based learning). Instead of concentrating on a single subject over a term, students learn different facets of a problem case. Thus, a first year student, learning about myocardial infarction would concentrate on the anatomy and physiology of the heart, coronary circulation, general pathology of necrosis/infarction, biochemical changes at the cellular level, etc. Students in a class on rectal carcinoma would be given a slide, blood picture, serum carcinoembryonic antigen levels, barium enema plate and a specimen photograph. They are then asked to evaluate them, study and arrive at a logical conclusion. The teacher ('facilitator') ensures that the salient features have been grasped. In the early phases of the curriculum, the emphasis is on basic sciences, while later, the thrust is on differential diagnosis and management. The students work in small groups and do peer presentations.

Sceptics say that the basic sciences are not taught in enough detail and that the knowledge imparted is patchy. Embryology, pharmacology and general pathology are not formally taught. Rare problems may not be taught at all—with obvious consequences in practice. The GMC is overseeing the implementation of the system and also monitors the performance of the medical schools. The first batches of such students are on the verge of graduating and will shortly be Junior House Officers (corresponding to our interns). The results of this experiment will then be evident.

For Indians, though, it is perhaps more relevant to concentrate on achieving uniformity in the standard of medical education in India.

KEDAR DEODHAR, *Belfast, Northern Ireland*

Leptospirosis epidemic in Mumbai

Every monsoon, Mumbai sees a rise in infections such as gastroenteritis, typhoid and malaria. Particularly for those living in slums, this is yet another blow to their already precarious existence. This year a relatively new infection hit the headlines. In an uncharacteristic move, a group of doctors in private practice held a press conference and claimed that there was a ravaging epidemic of 'leptospirosis' in the city. The media carried stories on the disease with poignant pictures of patients lying on hospital beds. Grotesque details were provided on how the spirochaete travels from rat urine to rain water and thence into the human circulation through cuts and bruises as 'Mumbaikars' wade their way through knee-deep water on rainy days. Government officials initially denied that there was an epidemic but sent teams to affected areas to investigate it and admitted finally that there were at least 40 deaths related to the disease. Reminiscent of the 'plague' of 1994, some doctors stated that what was being labelled as leptospirosis, was in fact smear-negative falciparum malaria. However, doctors working in public hospitals said—probably realistically—that this infection was always seen during the monsoon and that there was nothing unusual this year, except the media hype.

With the monsoon on the ebb, the infection too seemed to decline. The disease remained on the front pages for a few days, then receded to the inner ones and finally disappeared. For a city that boasts of some of the finest physicians and hi-tech medical services in India, every year the monsoons bring a grim reminder of how we have apparently achieved so much and yet so little on controlling diseases.

SANJAY NAGRAL, *Mumbai*