Incidence of leprosy, Karimui, New Guinea. Population was surveyed in 1964 then in 1966, then yearly until 1974. 1965-6 is average of two years. From 1975 to 1979, 19 new cases were detected, six in the vaccinated and 13 in the unvaccinated groups; these have been averaged.

lepromatous, multibacillary leprosy (the reservoir of infection), demonstrating the rapid decline of the disease, previously highly endemic in a very isolated area. Virtually complete interruption of transmission has been achieved 12 years after starting chemotherapy, which cannot be due to "socioeconomic standards."

Surprisingly, Lienhardt and Fine do not consider the findings of the three, double blind, random, controlled trials in Uganda,⁶ New Guinea,⁷ and Burma,⁸ which have given contradictory results, in concluding that BCG is effective in preventing leprosy. Moreover the effect of BCG against lepromatous leprosy, the form which spreads the infection, could not be assessed in the Uganda trial because there were no cases in the unvaccinated group. In the Burma trial 40-70% of leprosy was predicted to be lepromatous⁸ but only 19 out of 831 patients, or 2.3% of the unvaccinated group, were found at the final follow up;⁷ the reservoir of infection had virtually been removed by dapsone monotherapy,⁹ making assessment of the efficacy of BCG impossible. In Karimui, New Guinea, the effect of BCG against lepromatous leprosy was not statistically significant.¹⁰

The claim that BCG is effective against leprosy in Venezuela is based on the results of a case-control study and not on the randomised, double blind, controlled trial, which compared the effect of BCG alone and BCG with *Mycobacterium leprae* and did not include an unvaccinated group.¹¹ The current trial in Malawi also excludes an unvaccinated group.¹² Finally, in view of the AIDS epidemic, is it safe to carry out routine BCG vaccination?¹³

If leprosy is to be eliminated by 2000 then evaluation needs to be improved. Indeed, it is surprising that a fall in the prevalence of treated cases is being used to monitor the decline of the disease; a fall in incidence should be used. New rates of lepromatous leprosy and leprosy in children should also be recorded. Dapsone monotherapy has been very successful in treating patients and reducing incidence, particularly through the mass treatment campaigns in West Africa; it is unnecessary to give every patient multidrug therapy, which should be reserved for newly diagnosed lepromatous leprosy and for those lepromatous patients who have not responded to dapsone. Most patients with non-lepromatous leprosy have self limiting disease, so they should not need multidrug therapy.

C L CRAWFORD

Department of Anatomy,
Westminster and Charing Cross Hospital,
London W6 8RF

1 Lienhardt C, Fine PEM. Controlling leprosy. *BMJ* 1992;305:206-7. (25 July.)

2 Crawford CL. In spectacular retreat. *BMJ* 1990;300:261.

3 Boughton CR, Scott GC, Russell DA, Vincin DR. A preliminary report on the use of the depot sulphone preparation acedapson ("Hansolar") in the control of leprosy. *Med J Aust* 1971;1:1258-62.

4 Bagshawe A, Scott GC, Russell DA, Wigley SC, Merianos A,

Berry G. BCG vaccination in leprosy: final results of the trial in Karimui, Papua New Guinea, 1963-79. *Bull WHO* 1989; 67:389-99.

- 5 Scott GC, Russell DA, Boughton CR, Vincin DR. Untreated leprosy: probability for shifts in Ridley-Joplin classification. Development of "flares" or disappearance of clinically apparent disease. *Int J Lep Other Mycobact Dis* 1976;44:110-22.
- 6 Stanley SJ, Howland C, Stone MM, Sutherland I. BCG vaccination of children against leprosy: final results. *J Hyg Camb* 1981;87:233-48.
- 7 Lwin K, Sundaresan T, Gyi MM, Bechelli LM, Tamondong C, Garbajosa PG, et al. BCG vaccination of children against leprosy: fourteen-year findings of the trial in Burma. *Bull World Health Organ* 1985;63:1069-78.
- 8 Vaccination against leprosy [editorial]. *BMJ* 1966;1:1-2.
- 9 Lwin K, Zuiderhoek B. Case detection rates for central Burma (1962-1972). *Int J Lep Other Mycobact Dis* 1975;43:125-8.
- 10 Russell DA. BCG vaccination in the prophylaxis of leprosy. *Abstracts of the 10th International Leprosy Congress, Bergen* 1973:135. (No 7/221.)
- 11 Convit J, Sampson C, Zuniga M, Smith PG, Plata J, Silva J, et al. Immunoprophylactic trial with combined *Mycobacterium leprae*/BCG vaccine against leprosy: preliminary results. *Lancet* 1992;339:446-50.
- 12 Fine PEM, Ponnighaus JM. Leprosy in Malawi. 2. Background, design and prospects of the Karonga prevention trial, a leprosy vaccine trial in northern Malawi. *Trans R Soc Trop Med Hyg* 1988;82:810-7.
- 13 Athale UH, Luo-Mutti C, Chintu C. How safe is BCG vaccination in children born to HIV-positive mothers? *Lancet* 1992;340:434-5.

Removal of central venous catheter and venous air embolism

EDITOR,—The report from Mennim and colleagues¹ and the correspondence it has generated^{2,3} serves as a timely reminder of some of the complications that may occur during the introduction and removal of central venous catheters. The "head down" and Trendelenburg positions are ways of increasing central venous pressure and so prevent the aspiration of air into the venous circulation. Another method that has not been mentioned is to ask patients, while supine, to exhale and hold their breath in expiration.⁴ This increases intrathoracic pressure and causes "flow-back" of blood when the syringe is disconnected from the introducing needle. The guide wire is then quickly advanced. If an introducing sheath is placed in the central vein, the pacemaker or pulmonary arterial catheter (for example) may be passed rapidly also during this phase of respiration. For the temporary placement of such catheters, however, the "self seal" type of introducing sheath (with a side arm for flushing) minimises still further the risk of air aspiration. For the occasional patient who is unable to tolerate the head down or Trendelenburg position (because of pulmonary oedema, for example) this is possibly a safer alternative, provided of course that the patient is compliant in performing this sort of manoeuvre. The removal of catheters can also be accompanied by the patient carrying out a similar manoeuvre, the air occlusive dressing being immediately to hand.

PAUL BROADHURST

Department of Cardiology,
St Bartholomew's Hospital,
London EC1A 7BE

- 1 Mennim P, Coyle CF, Taylor JD. Venous air embolism associated with removal of central venous catheter. *BMJ* 1992;305:171-2. (18 July.)
- 2 Peters JL. Removal of central venous catheter and venous air embolism. *BMJ* 1992;305:524-5. (29 August.)
- 3 Baer GA, Nordback I. Removal of central venous catheter and venous air embolism. *BMJ* 1992;305:525. (29 August.)
- 4 Smith JAR. Minor procedures. In: Kyle J, Smith JAR, Johnston DH, eds. *Pye's surgical handicraft*. London: Butterworth Heinemann, 1992:39.

Ecstasy and the dance of death

EDITOR,—John A Henry states that ecstasy's "psychotherapeutic potential began to be explored in fields as divergent as marriage guidance, alco-

holism, and enhancement of perception in elderly people—all without benefit."¹ He also reports the undesirable physical symptoms reported by me in 1986 but mentions none of the benefits.² This is a misrepresentation of the facts.

Eighteen of my 29 subjects reported positive changes in mood after their session; 23 reported improved attitudes, such as toward self and life in general; 28 reported improvement in interpersonal relationships, and three of the five couples reported benefits from a few days up to two years; nine reported improvements in their working life; 14 reported diminished use of abusable substances (alcohol, marijuana, caffeine, tobacco, cocaine, and LSD); 15 reported beneficial changes in their life goals; and all nine subjects with diagnosable psychiatric disorders reported considerable relief from their problems (dysthymia, simple phobia, personality disorders, and depressive disorders). There were also other benefits during the sessions.

A recent article reports the benefits resulting from the use of the drug by 20 psychiatrists.³ Ten reported improved social or interpersonal functioning, nine reported positive changes in values or life priorities, eight reported improved occupational functioning, and five reported a decreased desire to use alcohol, in addition to other benefits.

Henry also states, "While its therapeutic possibilities were being discarded its potential for misuse was being discovered." The therapeutic possibilities are far from being discarded. A group of Swiss psychiatrists have been successfully using the drug as an adjunct to psychotherapy for years, and a psychiatrist at the University of California, Irvine, has applied for permission to study its use in reducing pain and psychological distress in patients with terminal cancer (D Harlow and J Beck, Multidisciplinary Association for Psychedelic Studies international conference of psychoanalytic psychotherapy, Bern, 1990; C S Grob *et al*, unpublished data).⁴

I agree that ecstasy can be dangerous in high doses, especially when accompanied by dehydration and increased body temperature from dancing for hours, but in a controlled psychiatric setting it can be beneficial to properly screened and prepared patients. Hopefully, governments in addition to Switzerland's will begin to allow controlled studies to prove conclusively that the benefits experienced by my patients are not the exceptions but the rule.

GEORGE GREER

Santa Fe, New Mexico 87505,
USA

- 1 Henry JA. Ecstasy and the dance of death. *BMJ* 1992;305:5-6. (4 July.)
- 2 Greer G, Tolbert R. Subjective reports of the effects of MDMA in a clinical setting. *J Psychoactive Drugs* 1986;18:319-27.
- 3 Liester MB, Grob CS, Bravo GL, Walsh RN. Phenomenology and sequelae of 3,4-methylenedioxymethamphetamine use. *J Nerv Ment Dis* 1992;180:345-52.
- 4 Doblin R. Swiss psychedelic research update. *Multidisciplinary Association for Psychedelic Studies Newsletter* 1992;2:4.

Understanding schizophrenia

EDITOR,—L S Pilowsky seems to reach a different conclusion from the biological evidence about the nature of schizophrenia¹ than does Julian Leff in a recent commentary in *Nature*.² For Pilowsky it is clear that there are structural and physiological abnormalities present in the brain. By contrast, Leff suggests that schizophrenia remains a puzzle and recognises the plethora of hypotheses about the condition.

Some caution may be required when expressing the results of comparisons of the brains of schizophrenic and normal people. For example, although on average the brains of schizophrenic people may have larger ventricles, a simple statement that "schizophrenics have larger ventricles than controls" will be marked wrong in an MCQ examination of the Royal College of Psychiatrists,³