Australian euthanasia law throws up many difficulties

Jacqui Wise, *BMJ*

A report into seven patients who requested euthanasia in the Northern Territory of Australia shows that despite the careful design of the Rights of the Terminally Ill Act, accurate prediction of prognosis was subject to disagreement and the effects of depression were difficult to assess.

The provision of euthanasia for terminally ill people was legal in the Northern Territory for nine months between July 1996 and March 1997, when the act was repealed. During this time seven patients, all with cancer, made formal use of the act, and four of them died under the act. Professor David Kissane and Dr Annette Street from the University of Melbourne Centre for Palliative Care interviewed Dr Philip Nitschke (the only doctor to report euthanasia deaths during this period) and compiled case reports of the seven patients (*Lancet* 1998;352:1097-102).

The act stipulated that two doctors had to agree that a patient had a terminal illness that would result in the patient's death in the normal course and without application of extraordinary measures. But, the authors wrote, "the potential length of future life of a patient with cancer can be very difficult to judge accurately, and differences of expert opinion were evident in two of these cases."

One case was of a 52 year old woman with mycosis fungoides, who had well controlled pain but pruritis that resulted in skin trauma, infection, eyelid oedema with closure, and persistent aural discharge. One oncologist gave the patient's prognosis as nine months, but a dermatologist and a local oncologist judged that she was not terminally ill. Other doctors declined to give opinions. After a national television appeal an orthopaedic surgeon agreed to see her and certified that the provisions under the act had been complied with. She underwent euthanasia on 2 January 1997.

The act specifically requires a psychiatrist to confirm that patients do not have a treatable clinical depression. According to the report, however, four of the seven cases had symptoms of depression, including reduced reactivity, lowered mood, hopelessness, and suicidal thoughts. Confirmation of depression was not easy because the patients saw the psychiatric assessment as a hurdle to be overcome. The authors wrote: "There is an important role for psychiatry in oncology and palliative care to ensure that depression is actively treated, but a gatekeeping role may be flawed if seen as adversarial by patients and viewed as blocking successful treatment, rather than being one part of proper multidisciplinary care."

Another problem was that the political debate around the act tended to cast practitioners of palliative care as opponents of euthanasia campaigners, and this may have also been detrimental to the patients' care. □

AP PHOTO/ROHAN SULLIVAN

Dr Philip Nitschke reported seven euthanasia deaths

Genotype linked to long QT syndrome

Deborah Josefson, *San Francisco*

The clinical course of the congenital long QT syndrome, a hereditary arrhythmic disorder, can be predicted through genotypic analysis, according to researchers from the University of Rochester researchers *(New England Journal of Medicine*, 1998;339:960-5).

This is the first research that has found a link between variations in genotype and differential clinical disease expression, and the finding may allow doctors to tailor the treatment of patients who have the syndrome according to their genotype.

The long QT syndrome is caused by defective ventricular repolarisation leading to abnormally long pauses between heart beats. The prolonged pauses can cause cardiac syncope and additionally serve as arrhythmogenic substrates, allowing ectopic beats to occur. Patients with the long QT syndrome may be asymptomatic or experience recurrent fainting spells, palpitations, torsade des pointes, and ventricular arrhythmias leading to sudden death.

About a third of patients with the long QT syndrome are asymptomatic, with the remaining two thirds experiencing two or more syncopal events. These events may be triggered by exercise, strong emotions, loud noises, and awakening from sleep. Before this study, there was no way to predict which patients with syncope would go on to have a potentially fatal ventricular event.

The long QT syndrome is caused by mutations in cardiac potassium channel genes and the sodium channel gene. Four specific gene mutations have previously been identified and the genetic locus is known in three of them; it was not known until now, however, whether the genotype influences the clinical course of the disease.

The researchers determined the genotype of 541 people with the long QT syndrome enrolled in an international registry—112 had mutations at the LQT1 locus, 72 at the LQT2 locus, and 62 at the LQT3 sodium channels. The researchers found that the risk of a cardiac event before the age of 40 was significantly higher among those with mutations at the LQT1 (63%) or LQT2 (46%) locus than among those with mutations at the LQT3 locus (18%). However, although the cumulative mortality is similar regardless of the genotype, the percentage of cardiac events that are lethal is significantly higher in families with mutations at the LQT3 locus.

Genetic testing of patients with the syndrome may dictate future therapeutic approaches as well serve as a reassurance to patients with clinically milder mutations. Patients with the LQT3 mutation may benefit from more aggressive treatment—for example, with class Ib sodium channel blockers. However, because the QT interval itself in an independent risk factor for adverse effects, the researchers emphasise that this interval should be considered along with genotypic information.

Dr Arthur Moss, one of the authors of the paper, said: "It's one thing to figure out which genes are related to different disorders, but in this study abnormal genes are being related directly to the different courses the disease can take. This approach of linking a defective gene to clinical outcome is the major direction medicine will take in the next century." □

Correction

Pilot bowel screening service to start in Britain: The news story (19 September, p 769) should have read "Cancers of the colon and rectum are the second most common cancers in the United Kingdom, killing almost 20 000 [not 200 000] people a year."