death as the primary purpose. Again, by distinguishing between the right to kill and the right to die he concluded that the official solicitor’s appeal should be dismissed. Lord Justice Balcombe warned against setting down “an all embracing test since the circum-
stances of these tragic cases are so infinitely various.” Similarly, Lord Justice Taylor thought that the proper criterion must be a matter of degree and that all the circumstances should be looked at to decide if “such a life would be so afflicted as to be intolerable to that child.”

Implications
It was decided that the court could direct that treatment need not be given in this particular case, even though death would naturally ensue. In reaching this decision, the court has accepted that it can be

wrong to prolong life at any cost. The seemingly limitless bounds of medical technology need not be employed “officiously to keep alive” a patient without considering his or her best interests. However, a strong safeguard came in the statement that “what can never be justified is the use of drugs or surgical procedures with the primary purpose of hastening the moment of death.” It is important to draw a line between that area on which the court has made a decision and the area which was felt to be clearly outside the boundaries of the debate—as Lord Donaldson explained, “What is at issue in these cases is not a right to impose death, but a right to choose a course of action which will fail to avert death.”

Lesson of the Week

Fatal outcome with use of rectal morphine for postoperative pain control in an infant

G K Gourlay, R A Boas

Increasing emphasis on better treatment of post-

operative pain has led to innovative techniques for

administering drugs and the development of acute pain

management teams in many countries. Such pro-

grammes should recognise the narrow therapeutic ratio

for opioid drugs and include staff education and

clinical protocols to enhance both efficacy and safety of

care. We report a fatal outcome with rectal morphine in

an infant after nephrectomy, drawing attention to

these needs.

Case report
A 71/2 month old boy weighing 9 kg with refractory

hypertension from neonatal renal vein thrombosis was

admitted to a large regional hospital in New Zealand

for a left nephrectomy. Anaesthetic management

(balanced relaxant technique) proceeded uneventfully,

with blood loss estimated to be 10 ml. The child

breathed promptly after reversal of anaesthesia and

showed stable blood pressure, pulse, and respiratory

rate throughout the stay in the recovery room.

Orders for postoperative analgesia were discussed by

the consultant surgeon and anaesthetists during the

operation and were for 1·5 mg of morphine intra-

muscularly, two to three hourly as required. However,

after the ward nursing staff expressed humanitarian

concern about repeated intramuscular injections the

ward house staff changed the order to morphine

suppositories (4 mg) four hourly as needed for pain.

There were no specific orders covering the frequency

of recording or limits for assessment of respiratory

status or extent of pain relief. The first suppository

was given six hours after reversal of anaesthesia and

the intervals between successive suppositories were 4·5,

3·75, 4·75, and 3·75 hours. The child’s condition was

essentially unremarkable for the first 22 hours, and he

passed urine twice during this period.

The child’s pulse rate changed appreciably 22 hours

after operation, rising from 120 to 168 beats/min.

About this time the infant was reviewed by the

consultant surgeon, his registrar, and the senior

nursing staff of the ward. The surgeon noted that the

patient was sedated, a little cyanotic in the periphery,

and cold, with a sluggish return of circulation after
digital compression. Only at the end of this examination

was the surgeon informed that his patient was receiving

morphine rectally rather than intramuscularly, but no

new orders were given except to cover the child. Three

hours after the fifth morphine suppository was given

(about 30 minutes after the examination) the infant

suffered a cardiac arrest with profound cyanosis, from

which he was resuscitated.

The serum morphine concentration (assay specific

for unconjugated morphine) in a sample collected 1·5

hours after the cardiac arrest was 0·094 mg/l. Despite

vigorous intensive care, the infant deteriorated without

regaining consciousness and died the next day. A

postmortem examination noted the cause of death as

cerebral hypoxia, with no evidence of surgical or
cerebral haemorrhage or any pulmonary consolidation.

Hospital records indicated that there had been little

formal assessment of the efficacy of the rectal morphine

or of any possible relation between the dose or

frequency and adverse effects such as sedation and

respiratory depression. There were only general com-

ments such as “with effect,” which presumably

related to analgesia, though physiological measures of

blood pressure, pulse, respirations, and each new

colic dose were clearly noted. When questioned after

the event many of the nurses responded that, although

the patient was comfortable, the next morphine

suppository was inserted because of the perception of

“lack of effect.” An appropriate assessment would probably have indicated that the last two doses were not needed.

Discussion
This case exemplifies several principles of manage-

ment that may well apply to other novel routes of
giving drugs to both adult and paediatric patients.

The first important factor relates to the pharmacology

of rectal morphine, particularly the large variability of

absorption. Various reports suggest that the oral

bioavailability of morphine varies between 10% and

50% with a mean value of about 30%.

Therefore, in

1 Re T (a minor) [1990] 3 All ER 918.
2 Re C (a minor) [1990] 2 All ER 782.
3 Re E (a minor) [1990] 1 All ER 927.
A PAPER THAT CHANGED MY PRACTICE

Goya and hallucinations

I was doing an ear, nose, and throat house job when one of my chiefs, Sir Terence Cawthorne, gave a lecture on Goya's illness which shaped many of my subsequent interests in neurology. At the age of 46 Goya succumbed to the Vogt-Koyanagi syndrome of deafness and transient blindness. I clerked one such patient for my chief and have seen only two others in over 30 years of practice but it is the character of Goya that I remember. Total deafness was associated with brooding hallucinations, from which, even at their most horrific, he achieved wry amusement, drawing satisfaction from the reckless, masterly way he was able to transform the hideous and nightmarish distortions into his famous Black Paintings.

Some years later I developed an interest in hallucinations and their impact on art. I also became interested in the receptive aspects of speech and communication. As a senior registrar I looked at the social development of hearing children of deaf parents and also recorded the stages of babbling in an early attempt to predict their subsequent linguistic progress. When I was appointed to one of the few posts then available in adult neurology by good fortune there was a psychiatric unit for the deaf on my doorstep. I was allowed to study some of the central disorders of language masquerading as deafness and to examine many of the prelingually deaf schizophrenics who were actively hallucinating. The profoundly deaf have no hearsight in the range of the human voice, yet many of the deaf schizophrenics claimed that they heard voices speaking to them at the height of their hallucinations. There was even a hierarchy of communication: St Theresa might speak to you, but God spoke.

In my everyday practice I also became aware of Goya's example: of normal people subject to hallucinations in bereavement, the Charles Bonnet syndrome of philosopher's visions, and hallucinations after strokes, drug intolerance, or sensory deprivation. Some of my patients with musical hallucinations were able like Goya to turn them into something more pleasurable by tapping, humming, or singing, thus synchronising with the music.

—E. M. R. CRITCHLEY, consultant neurologist, Preston and North Lancashire