

extrapolation of data from high-risk communities nationally has been misleading.⁷ An ongoing initiative, the WHO Global Surveillance of Drug Resistance in Tuberculosis will produce, over the next few months, a more realistic assessment of resistance in many developing countries to complement initiatives in the developed world.

Mutations in genes associated with isoniazid, rifampicin, streptomycin, and ciprofloxacin resistance in most, but not all strains, have been identified, offering the possibility of rapid molecular tests for drug resistance in the next few years.^{8,9} Nevertheless, whereas most rifampicin resistance is associated with mutations in a single small region of the gene encoding the beta subunit of the DNA dependent RNA polymerase, isoniazid resistance is associated with multiple genes. MDR tuberculosis is acquired through the stepwise selection of mutants in poorly compliant patients and resistance is chromosomally rather than plasmid mediated in tuberculosis.⁹

Treating MDR tuberculosis requires prolonged hospitalisation, the use of more toxic second line therapy and perhaps adjunct surgery. Treatment is certainly expensive and 'salvage' therapy has been estimated to cost \$180 000 per patient in the USA.¹⁰ Nevertheless, recent evidence has shown that even in HIV positive patients death is not inevitable. In one study in HIV negative patients in New York City, 24 (96%) of 25 patients showed a clinical response to individualised treatment¹¹; a further study of 38 cases in which 34 (89%) were also HIV positive produced a median survival of 315 days.¹²

Successful therapy is associated with early diagnosis, treatment with at least three agents to which the isolate is susceptible and ensuring compliance through—for example, the use of directly observed therapy (DOT).¹³ MDR tuberculosis is a serious clinical, diagnostic and public health problem but it is, with appropriate resources and expertise, a solvable one.

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Rights of possession in human corpses

A recent case, *Dobson and Another v North Tyneside Health Authority and Another*, raised the question of whether the next of kin had possessory rights in cadaveric specimens.¹ A postmortem had been performed at the coroner's request and part of the brain (including brain tumour) of the deceased had been fixed in paraffin wax. Having been preserved for the duration required by the Coroners Rules (S1 1984 No 552), the brain was disposed of by the hospital. The brain was required by the plaintiffs, the administratrix of the estate and the son of the deceased, as evidence in a civil litigation case against North Tyneside Health Authority for alleged negligence in the treatment of the deceased. The Court of Appeal upheld an order that there could be no claim against the hospital which had stored the brain after the necropsy for subsequently disposing of it. The next of kin had not become personal representatives (administrators) at the time when the alleged wrongful interference with their possessory rights in the corpse had taken place. The Court of Appeal held that as next of kin they had no such rights.

In England, there is 'no property in a corpse' although there is increasing academic support for some proprietary rights.² It is sometimes suggested that the earliest authority

is Haynes's case (1614)³ determining the inability of a corpse to have proprietary rights in burial sheets, which was misinterpreted by commentators as meaning that a corpse was not capable of being property but was under ecclesiastical jurisdiction. Haynes was punished for stealing the shrouds. The earliest direct English authority appears to be *Exelby v Handyside* (unreported; preserved Siamese twins could not be property).⁴ In the eighteenth and nineteenth centuries, the practice of exhumation of buried corpses⁵ led to several cases reaching the courts. In 1723–4, a clause was suggested (but later withdrawn) in a Parliamentary Bill providing that bodies of executed persons in the counties of Cambridge and Huntingdon should be available for anatomical teachings. The supply from body-snatchers or resurrectionists was objected to by the local inhabitants and led to an attack on the Cambridge anatomical school in 1833.⁶ In *Sharpe's case* (1856–7),⁷ in which a son removed his mother's remains from a graveyard the 'no property' rule was upheld and the defendant charged for trespass to land. In *Williams v Williams* (1882),⁸ in which a friend of the deceased disinterred the body and sued the executors to recover the costs in accordance to a codicil in the deceased's will, it was stated

that the executors have a right to possession of a body until it is properly buried but that this is not a proprietary right. However, once a body has undergone a process of preservation requiring human skill—for example, embalming (but not fixing in paraffin wax), it may acquire the characteristics of property. This was accepted as arguable in *Dobson and Another v North Tyneside Health Authority*.¹ Thus, there may be property in a mummy although the question of rights in skeletons and anatomical specimens has not yet been resolved, although it seems there may be property in wire connections and tooth fillings.⁹

In contrast to the English position, in Canada and the United States, the deceased and surviving next of kin have quasi-property rights in the deceased body for the purposes of burial—delivery of the body to the coroner or undertaker being regarded as bailment.

English and Australian law fails to recognise the right to possession of a human corpse or cadaveric specimens and thus there can be no effective remedy for damage or unauthorised removal. There is no duty imposed on hospitals to retain tissue removed at postmortem examinations against the possibility that it might be material evidence in a civil litigation in the future. The question of proprietary or merely possessory rights in the numerous skeletons and anatomical specimens in museums and medical schools has yet to be clarified.

This is an area of law bedevilled by macabre and trivial distinctions which amount to a legal minefield for the medical profession. If a urine sample can be stolen,¹⁰ it is extraordinary that the principle that the greater includes the less cannot be applied in this field. At present, it is doubtful how far a doctor or a scientist would be entitled to bring a civil action for damages for trespass or conversion against anyone who interfered with cadavers or other human tissue, but cutting hair off a living person may be theft.¹¹ *Dobson and Another v North Tyneside Health Authority* makes it clear that next of kin as such, unless they become personal representatives (executors or administrators), have no possessory claims to a corpse. It recognises that it is arguable that once a body has undergone embalming or other application of human skill there may be property but leaves open the question where the boundary lies between this and fixing in paraffin wax which was

not held to be sufficient.¹ An Australian case¹² treated by a leading legal textbook as authority for the proposition that there may be property in dead or treated corpses is said by the Court of Appeal not to carry the point so the position is at large for argument. If *Dobson and Another v North Tyneside Health Authority* does clarify the position of next of kin as distinct from personal representatives, it also leaves open many of the difficult problems in the topic. It makes it clear that hospitals are not under a duty to preserve corpses merely because there may be a possibility that they may be required in evidence and to that extent relieves them of an enormous burden, but it is only to be expected that the legal advisors of litigious personal representatives are already devising means of circumventing this.

This decision and the considerable body of closely argued legal discussion over many years demonstrate without any doubt that this is an area where the law is in very urgent need of reform.

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Unrelated donor bone marrow transplantation: its use in leukaemias and allied disorders[★]

Bone marrow transplants from unrelated donors for leukaemias are increasing greatly in number and also in proportion to matched sibling donor transplants. The panel has considered unrelated donor transplant (UD-BMT) on the basis of efficacy, toxicity and indications in leukaemias. The conclusions and statements are based largely but not exclusively on information provided at the Consensus Conference.

Efficacy

1. Unrelated bone marrow transplants for some types of leukaemia can produce prolonged quiescence and, in some cases, eradication of disease.
2. Data based on serologically matched donors at HLA A, B and DR suggest that matched unrelated transplants may have similar survival to sibling transplants in comparable disease states. This is accepted as a reasonable statement but begs the question of what is implied by "matched" in unrelated transplants. Much of the data concerning the survival and toxicity in unrelated transplants has come from studies using serological typing.

[★]Consensus statement from the RCPE/Consensus Conference on Unrelated Donor BMT held on 29 and 30 October 1996.