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Commentary

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Dr Colin Walker has discussed, with sensitivity and admirable objectivity, some of the difficult questions that have dominated the ethics of infant care since the 1960s. Neonatal intensive care has been remarkably successful in ensuring the healthy survival of smaller and smaller infants and in preventing a considerable amount of crippling disability. In acknowledging its triumphs, however, we must not ignore its disasters—infants kept alive through the indiscriminate use of life saving techniques and condemned to 'lives' of grievous mental and physical handicap at great cost to themselves, their parents, and to society. During the past two decades the issues have become even more complex. Debates on the treatment of individual infants have become public, and paediatricians have found themselves in conflict with individuals or groups who have no connection with the infants or families concerned. Conflicts arise more from differing moral views about life and death or from differing interpretations of the law than from disagreements about the diagnosis or prognosis. Discussions and decisions previously viewed as intensely private matters between doctors and parents increasingly are subject to legal scrutiny and even, as in the United States, to government legislation.

An important question not addressed in detail relates to the advisability of resuscitation *at birth* of infants born at the limits of viability or with obvious severe abnormalities. Occasionally such an infant will do remarkably well but resuscitation may result in only a brief period of survival perhaps maintained by further intensive care or it may ensure more prolonged survival but with the infant's future clouded by grievous handicap—what Rachels calls 'being alive' as distinct from 'having a life.'[1]

Dr Walker states that 'with rare exceptions initial resuscitation is advisable as this give valuable time to make detailed clinical assessments and to prepare the family for their loss.' I agree. The delivery room is no place for 'snap judgments' of this kind especially as those responsible for taking immediate decisions about resuscitation may be relatively junior and may not have access to all the information. Inevitably too, there will be some uncertainty about the prognosis especially for the very tiny infants born at gestational ages under 26 weeks, some of which show remarkable vigour at birth and deserve a 'trial of life.'

It is important that junior doctors be given clear instructions about their responsibility regarding neonatal resuscitation. Infants of whatever gestational age or whatever the apparent abnormality should receive standard resuscitation including intubation and intermittent positive pressure ventilation if necessary when signs of life (respiratory effort or heartbeat) are present at birth. Subsequent decisions about the introduction or continuation of intensive care procedures to maintain life will be the responsibility of a senior doctor, usually the consultant, after discussion with the parents and other specialist colleagues as indicated.

Dr Walker is not specific about the 'rare exceptions.' It is difficult to list examples of congenital abnormality for which resuscitation is inappropriate because there is so much variation in complexity, severity, and prognosis. Much also depends on the attitude of the parents and the staff immediately concerned. It is worth recalling that the incidence of stillborn infants with spina bifida dropped significantly in the early 1960s after the introduction of a more optimistic surgical approach to treatment.[2] Anencephaly and similar gross abnormalities of brain development are perhaps the obvious exceptions to the general rule regarding resuscitation. With modern imaging and other techniques of prenatal diagnosis most of these infants are now identified during pregnancy and discussion with the parents should include consideration of the appropriate care at birth. In these circumstances there is no justification for employing intensive care in futile attempts at prolonging life. Nevertheless these infants deserve our respect as human beings no less than others and should be given all basic care with relief of any apparent distress of discomfort until they die. There have been suggestions that they could be valuable sources of organs for transplantation and might be kept alive until recipients are identified. Such a practice would conflict with some basic tenets of medical ethics and has disturbing implications if extended to other areas of clinical practice.

For the very tiny infant I believe that the decision on resuscitation in the delivery room is relatively straightforward. *All* infants showing signs of life should be resuscitated using intubation and intermittent positive pressure ventilation if necessary. What happens after the infant is transferred to the

intensive care nursery is another matter. Previously, I have identified some infants who should not receive intensive care and have suggested a flexible cut-off weight of 750 g at appropriate gestational age below which assisted ventilation would not be introduced *routinely*.[3] Paediatricians working in neonatal units have widely varying personal views on the appropriate use of intensive care for these very tiny infants. How selectively or how indiscriminately paediatricians use their skills and technology to prolong life should be the subject of continuing debate. Inevitably the criteria will continue to change. We must consider not only the effects of current practices on the infants themselves but the views of parents who must live with the consequences. We also must recognise the effect on resources that might otherwise be deployed elsewhere.

An exception to the above general rule is the tiny infant born with signs of life after an attempted late termination of pregnancy.[4] Paediatricians may be asked to resuscitate and treat one of these tiny abortuses despite the fact that a few minutes earlier, a gynaecological colleague was attempting to kill it. At present the law confers protection on every infant born alive and paediatricians have a duty to care for them but these infants may be damaged during the abortion procedure and are likely to be hypoxic, acidotic, and hypothermic by the time paediatric assistance is requested. It is also unlikely that their mothers will wish to care for them. Pressures to provide aggressive resuscitation and intensive care for these infants should be resisted.

To withdraw or withold a life saving treatment such as intermittent positive pressure ventilation from an infant is always a difficult and often an agonising decision to take but it is one which sometimes must be faced in the interests of infants and families. It is important that such a decision is made on good medical grounds based on an accurate diagnosis and prognosis. In future years economic considerations increasingly will affect decisions that utilise expensive high techology medicine. With finite resources and apparently infinite demands for care a 'line' must be drawn somewhere. Neonatal intensive care, which has expanded so rapidly in the past few decades cannot escape such constraints. We should ensure that this 'line' is drawn by paediatricians acting in the best interests of their infant patients and not by those responsible for the control of hospital budgets.

References

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3 Campbell AGM. Which infants should not receive intensive care? *Arch Dis Child* 1982;**57:**569–71.

4 Rhoden NK. The new neonatal dilemma: live births from late abortions. *Georgetown Law Journal* 1984;**72:**1451–509.