

sorrow and anguish of children with these handicaps. The psychological trauma which the family bears is tremendous which no amount of money, time or medical expertise can alleviate.

Is this the reason why many medical personnel are not motivated to salvage critically sick neonate? Will such medical personnel buy and maintain latest medical equipment and keep their knowledge up-to-date? Planners and policy makers need to motivate doctors by providing adequate rehabilitation mechanisms at grass-root level for such handicapped neonates. Medical personnel must be assured to appropriate long term care so that the family and society do not have to bear the financial and psychological burden of rearing of handicapped child.

Let us ponder over the relevance of such handicapped neonates who survive relevance of a serious illness but live a poor quality life, particularly in our country. This, however, does not, at the moment, imply a sanction for active or passive killing of such cases who live with serious morbidity and handicap. However, it would certainly raise the issue of euthanasia, in near future if technical supremacy overpowers nature's rule of survival of the fittest.

M.S. Baldwa,
B-102 Sumer Nagar,
S.V. Road, Borivali,
Bombay 400 092.

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Reply

Dr. Baldwa has raised some of very pertinent questions in relation to the Editorial(1). I fully endorse the views expressed regarding the need to provide appropriate rehabilitation facilities to all neonates who survive with major handicaps. Provision of these facilities is a costly proposition and in our country where even a neonate is not considered a patient and no resources are allocated, providing rehabilitation facilities is considered beyond the scope of affordability. However, these constraints should not come in the way of providing the best-possible treatment of such children.

Dr. Baldwa has suggested that moral ethical and legal justifications are necessary before improving the health statistics of the country. Life saved by successful resuscitation for a child who fails to breathe is the best justification morally, legally or ethically and infact denying this facility to an unborn child (who may end up as still-born) would be highly unjustifiable on all counts. It is true that nearly one-fourth of asphyxiated babies die. However, an overwhelming majority of the remainder are normal in spite of seizures(2). The risk of cerebral palsy in severely asphyxiated newborns is 5-10% as compared to 0.2% in the general population. However, in a long term follow up of children with hypoxic ischemic encephalopathy, 65-82% of babies were performing normally and were indistinguishable from their peer group(3). Data from the National Collaborative Perinatal Project(4) and the British National Child Development Study(5) suggest that perinatal factors of labor and delivery contribute little to the incidence of mental retardation and seizures. Only 3-13% infants

with cerebral palsy have evidence of intrapartum asphyxia(5).

It is often difficult to clinically identify initially or even subsequently during the neonatal period infants likely to have severe disability. By the time this identification is feasible, decisions for continuation of life support are no longer called for. Thus "ethical issues regarding decision making based on anticipated quality of life" as suggested by Dr. Baldwin becomes irrelevant and given the general favorable prognosis in asphyxiated babies, the clinicians are advised to give the benefit of care to a "neonate with no voice".

Stewart *et al.*(6) found that during 1946 to 1960, low birth weight babies had very high mortality and morbidity. During 1960 to 1977, the chances of healthy survival increased while three-fold chances of major handicaps remained at 6-8%. Other studies(7,8) have also shown that the survival chances of low birth weight babies have increased with significant drop in rates of neurological impairment.

Having a very low birth weight baby, places a considerable stress on the family, is quite understandable but whether it has a long term impact or not is not very clear. This does produce lots of financial strain on the family and the government, and the argument of being "cost effective" or not cannot be considered relevant for individuals(9). Providing good quality health care at affordable cost for all cases including neonates must form the basis of providing health care.

A. Narang

*Additional Professor,
Department of Pediatrics,
Post Graduate Institute of Medical
Education, Chandigarh 160 012.*

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