
Abstract

Much has been learnt during the last 50 years about the causes of neonatal mortality and morbidity and about practical means for minimising them in newborn lambs, kids, bovine calves, deer calves, foals and piglets. The major causes of problems in these newborns are outlined briefly and include hypothermia due to excessive heat loss or to hypoxia-induced, starvation-induced or other forms of inhibited heat production. They also include maternal undernutrition, mismothering, infection and injury. The published literature reveals that the scientific investigations which clarified these causes and led to practical means for minimising the problems, involved iterative successions of self-reinforcing laboratory and field or clinical investigations conducted over many years. These studies focused largely on solutions to the problems, not on the suffering that the newborn might experience, so that an analysis of the associated welfare insults had not apparently been conducted until now. The present assessment focuses on potentially noxious subjective experiences the newborn may have. The account of the causes of neonatal mortality and morbidity outlined early in this review indicates that the key subjective experiences which require analysis in animal welfare terms are breathlessness, hypothermia, hunger, sickness and pain. Reference to documented responses of farm animals and, where appropriate, to human experience, suggests that breathlessness and hypothermia usually represent less severe neonatal welfare insults than do hunger, sickness and pain. Major science-based improvements in the management of pregnancy and birth have markedly reduced the overall amount of welfare compromise experienced by newborn farm animals and further improvements may be expected as knowledge is refined and extended in the future.

© 2003 Elsevier Ltd. All rights reserved.