ABSTRACT

To determine the relationship between selected risk factors and infant mortality at Chiang Rai regional hospital, Thailand, this hospital based case control study was conducted for the period of Thai fiscal year 1997. Among the hospital deliveries and admissions during study period, each of 151 cases and controls were selected from those infants with death outcome as cases and recovery for controls.

The results showed that race, family income, age of mothers, parity and birth interval associated significantly with infant mortality. High risk groups were hilltribes, low income, young and old maternal age, grandmultip mothers, and babies born of shorter birth interval. Significant odd ratio estimates indicated that preterm infant, low birth weight baby, birth asphyxia, HIV positive mothers, disease before pregnancy with previous history of abortion and complication during pregnancy were risk factors on infant mortality.

Antenatal care was found to be the most important health care service factor for the survival of an infant. Chisquare for linear trend analyses revealed frequency of antenatal visits and birthweight were significantly associated with infant mortality (P = 0.000) after controlling age group and parity. The chain of sequence starting from antenatal care service to final outcome of infant death was explained by this study. Statistically significant association between antenatal care and gestational age (P = 0.013), gestational age and birth weight (P = 0.000) and frequency of antenatal visit and low birth weight (P = 0.001) were observed to explain pregnant women with prenatal care were more likely to deliver a preterm baby resuting in a low birth weight infant leading to increased infant mortality.

Certain conditions originating in the perinatal period, such as preterm infant, birth asphyxia and other and ill-defined conditions originated in the perinatal period unspecified were major causes of infant death at Chiang Rai hospital. A well designed primary health care system is essential to eradicate the main but preventable causes of infant mortality by improving quality of maternal and child health care services.