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WEENA PINIWATTANA : FACTORS IN RELATION TO BIRTH ASPHYXIA AT
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The objectives of this research are to study the rate of birth asphyxia, the general characteristics of the mothers who have birth asphyxia newborns, the association and relative risks between birth asphyxia and maternal factors, delivery factors and newborn factors and the logistic model of birth asphyxia. The population of this research were 15,273 mothers who delivered their babies at Ramathibodi Hospital during January 1 1996 to December 31 1997 and were 15,273 deliveries. The case group was composed of 374 selected mothers who had birth asphyxia newborns and the control group was 374 mothers who had newborns without birth asphyxia. This study was a case-control design and the data was analysed by multiple logistic regression.

This study revealed that the rate of birth asphyxia was 0.39. The following five factors and two interactions could explain 20.38 percent of variance in birth asphyxia ($R^2=20.38$). Logistic regression for birth asphyxia revealed the following ln Odds equation, modified by different variables for different factor and interaction.

$$\begin{aligned} \ln Odds = & -1.7557 + 0.9102 (\text{forceps or vacuum delivery}) && \text{factor} \\ & + 3.7742(\text{breech delivery}) \\ & + 1.6537 (\text{caesarean delivery}) \\ & + 2.0966 (\text{intrauterine growth retardation history}) \\ & + 1.4993 (\text{maconium stained}) \\ & - 0.4270 (\text{stimulated contraction drug}) \\ & -0.5184 (\text{birth weight lower than 2,500 grams}) \\ & + 0.8153 (\text{birth weight more than 3,999 grams}) \\ & + 2.7233 (\text{ gestational age less than 37 weeks and } && \text{interactions} \\ & \text{birth weight lower than 2,500 grams }) \\ & + 1.7954 (\text{stimulated contraction drug and prolong first stage of labour}) \end{aligned}$$