



CHAPTER VIII

DISCUSSION

Prognostic factors of stroke have previously been studied in the short and long term . Early mortality rate within the first 3 weeks varies from 22 - 56 percent. In the Oxfordshire Community Stroke Project it was found a four-fold higher fatality rate in hemorrhagic stroke than in ischemic stroke (Bamford et al., 1988). Predictors of early mortality after stroke include high blood pressure on admission (Aho et al., 1980; Marquardsen, 1969), age (Marquardsen, 1969; Herman et al., 1982; Sacco et al., 1982), hyperglycemia (Poungvarin, 1990), high hematocrit and atrial fibrillation (Lowe, 1983; Sandercock et al., 1986), pupillary changes, gaze paresis, extensor plantar response, abnormal breathing, abnormal body temperature, and meningeal irritation (Marquardsen, 1969), and dysphagia (Barer, 1987, 1989, Gordon et al., 1987).

Oxbury et al. (1975) reported that a combination of unconsciousness, gaze paresis and dense hemiplegia was the best predictor of early death in a series of patients with clinical diagnosis of cerebral thrombosis. But the predictive value for death of 37 percent with a different levels of consciousness was variable and adding other variables actually reduced the accuracy of the prediction to 28 percent. So, our study used a prognostic model which is suitable and has a high predictive accuracy of early mortality in hospital after ICH.

The results of the univariate analysis shows that 5 out of 15 variables are potentially good predictors. These predictors are time from onset to diagnosis, Glasgow Coma Scale, site of hematoma, intraventricular hemorrhage, and volume of hematoma. Although these variables were the only statistically significant, all variables were included in logistic regression analysis. Each variable was entered for calculation in stepwise manner, after adjusted risk for each variable, only 4 of the potentially predictors were statistically significant and included in the equation, which were sex, Glasgow Coma Scale, intraventricular hemorrhage, and volume of hematoma. For a female sex, a high Glasgow Coma Scale and no intraventricular hemorrhage, the outcome seems to be good. On the other hand, the outcome is poor if the hematoma volume is more than 60 cm³.

For sex that was the one of the predictors which might be different from other studies that sex was not influenced the prognosis of those patients. It would be happened from hospital bias because Pramongkutkloa Hospital was military hospital, so the patients would be male more than female.

Improvement of the model due to covariate analysis is calculated by Chi-square which was 40.023, the probability of Chi-square with a 4 degree of freedom is 0.000. So we concluded that covariate provides a significant improvement in the model. Goodness of fit of the model, Hosmer-Lemeshow chi square was 7.38 with 8 degree of freedom (P=0.4963), so model does fits the data quite well.

Sensitivity, specificity, and predictive accuracy of the model was about 75 ,85.71, and 81.18 percent respectively. ROC curve was calculated, and the area under curve is 0.8642. Although the sensitivity is not so high, we can use the ROC curve to adjust the sensitivity of the model.