

Thesis Title The Effect of Intravenous Infusion on the
 Plasma Sodium Level of Mothers and Newborn
 Infants

Name Boonrut Patrakulpiched

Degree Master of Science (Medical Epidemiology)

Thesis Supervisory Committee

 Amphorn Ittiravivongs, M.D., D.T.M & H., M.Sc.,
 (C.H.D.C.), Ph.D.

 Vanich Vanapruek, M.D., Dip. American Board of
 Pediatrics, Cert. Fellowship in Nephrology,
 Cert.Fellow in Leadership in Health Profession.

 Junya Pattara-arechachai, B.Sc., M.S.P.H., M.Sc.
 (biostat), D.Sc.(Biostat)

Date of Graduation 14 May B.E. 2534 (1991)

ABSTRACT

The prospective cohort study for the effect of oxytocin infusion during labour on maternal and cord serum sodium was performed in Pramongkutklao Hospital during December 1990 to March 1991.

A total number of 113 normal vaginal delivery, no medical complication pregnant women and their infants were divided into 2 groups, one received only D5N2 (34.5%), the other received D5N2 with oxytocin (65.5 %). After completing the consent form, 3 blood

specimens were collected. Two specimens were from mothers on admission and post delivery, the other was from cord blood. Direct potentiometric method was used to determine serum sodium levels.

Both groups had comparable general characteristics: maternal age, weight before delivery, height, gestational age and serum sodium on admission. Mean of maternal serum sodium post delivery in the group with oxytocin was significantly decreased from the serum sodium on admission after fluid infusion. Among two groups, their means of serum sodium post delivery, either of maternal or cord bloods were not significantly difference. Even though rate of oxytocin infusion was in normal limit, means of volume of fluid infusion between both groups were significantly difference.

There was no significant difference in incidence of hyponatremia among mothers and their newborn infants between both groups. There was no other complication such as tachypnea, convulsion, or weakness, except neonatal hyperbilirubinemia occurring in this study. And the association between hyponatremia and neonatal hyperbilirubinemia was found.