Chapter 21
Cost-effective of Exogenous Surfactant Replacement Therapy at Queen Sirikit National Institute of Child Health, 2006–2011

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Introduction
The newborn unit is set up for center of excellent in this institute and we also take care most of preterm cases too. According to high cost, surfactant replacement therapy had been limited utilization in Thailand. Nowadays, surfactant replacement therapy is frequently used in our institute and we had report more preterm survivors with this treatment, so we are interested in reviewing the cost of treatment RDS with and without surfactant.

Objectives
To compare the cost and outcomes of RDS treatment with and without surfactant.

Methodology
Study populations were preterm infants born at Rajavithi hospital diagnosed as RDS were admitted at Queen Sirikit National Institute of Child Health and treated with surfactant (Beractant) compared to no surfactant treated RDS cases during 2006-2011.

Results
The data of two hundred and sixteen infants with RDS were reviewed. One hundred and nine infants received surfactant because they were diagnosed as moderate to severe respiratory distress syndrome and with no surfactant in 107 cases with mild RDS. The mortality rate was 11.11 percent (24 cases from 216 cases). We found more teenage mothers but lesser numbers of antenatal care in mothers of the surfactant group than in the control group with statistical significant difference. We can decrease oxygen requirement to less than 40 percent in 102 cases (93.5%) of surfactant group within 24 hours after therapy. This study showed more cases with statistical significant different in complications (PIE, BPD, ROP and sepsis) in the surfactant group than the control group but no significant difference in mortality rate between each group. The average charge from hospital for the therapy in the surfactant group of infant birth weight less than 1000 grams is 476866 Baht but we can reimburse only 164042 Baht per case. It was found that the capital loss of the cases with birth weight less than 1000 grams was more than in case without surfactant therapy.
Conclusions

The benefit of surfactant therapy in moderate to severe RDS is to decrease the mortality rate but no effect on the incidence of BPD and ROP. The hospital charge in preterm birth weight less than 1000 gram treated with surfactant was the highest but could reimburse more money from National Health Security Office than in case with no surfactant therapy. We cannot conclude whether using surfactant replacement therapy in RDS is cost-effectiveness or not in Thailand but we have to use as the recommendation of treatment in respiratory distress syndrome.

Reference