

The effect of antenatal corticosteroids on preterm neonates born at less than 24 weeks of gestation

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Objectives (목적)

Antenatal corticosteroid (ACS) treatment is widely used for the prevention of neonatal mortality and morbidities including respiratory distress syndrome (RDS). However, there is little information on efficacy of ACS at less than 24 weeks of gestation. This study is aimed to estimate the effect of ACS therapy on the neonates born at less than 24 weeks of gestation.

Methods (연구 방법)

Pregnancy and neonatal outcomes of 35 singleton and 9 twin pregnancies delivered at 22+0~23+6 weeks of gestation between January 2001 and May 2009 were retrospectively evaluated. Stillbirths, voluntary terminations, parental elective nonresuscitations were excluded. Subjects were categorized into three groups according to ACS exposures: (1) no steroid group (n=17) (2) partial steroid course group (n=14) (3) complete steroid course group (n=13).

Results (결과)

Pregnancy outcomes including gestational age at delivery, birth weight, route of delivery and gender were similar in the three groups. Overall, neonatal mortality rate was 47.2% (25/53) and the mortality rate was similar in the three groups (57.9% vs. 38.9% vs. 43.8%, $P=0.485$). Two neonates expired after an initial resuscitation at delivery room. RDS occurred in all other neonates (n=51) that survived after an initial resuscitation at delivery room and transferred to the neonatal intensive care unit (NICU). The incidence of other neonatal morbidities including intraventricular hemorrhage, necrotizing enterocolitis and sepsis were not significantly different among the three groups. Duration of NICU stay of the survivors was not significantly different among groups.

Conclusions (결론)

Although the number of subjects was small, the result of this study suggest that 1) RDS occurred in almost all neonates born at less than 24 weeks of gestation, but their survival rate was over 50%, 2) ACS therapy had no effect on neonatal mortality and morbidities including RDS. However, our study is limited by its nonrandomized retrospective nature and small number of subjects. Therefore, further studies are needed to clarify the effect of ACS at less than 24 weeks of gestation.