

JCK Poster

JCK Poster 4 (III-JCKP4)

Cardiac Surgery

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Sun. Jul 9, 2017 1:00 PM - 2:00 PM Poster Presentation Area (Exhibition and Event Hall)

1:00 PM - 2:00 PM

[III-JCKP4-09]Early surgical occlusion of patent ductus arteriosus in preterm neonates

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Objectives

Surgical intervention of patent ductus arteriosus (PDA) is done when pharmacological treatment is contraindicated or fails; however, it remains unclear exactly when to perform surgery. We attempted to evaluate the optimal timing of surgical treatment for PDA in preterm neonates.

Methods We retrospectively evaluated 66 symptomatic preterm neonates without congenital intracardiac anomaly who underwent surgery for PDA from 2012 to 2016. The primary occlusion group underwent surgical occlusion without medical treatment. The secondary occlusion group received surgery following medical failure. We divided each group into two subgroups according to the timing of the surgery (the age at operation ≤ 10 days vs. >10 days). Surgical outcomes of each group were compared.

Results

The early occlusion group was associated with lower incidence of bronchopulmonary dysplasia ($p=0.035$) and pneumonia ($p=0.036$). The early occlusion was mainly performed in neonates with primary occlusion. The early primary occlusion group was significantly associated with fewer bronchopulmonary dysplasia ($p=0.045$) and pneumonia ($p=0.004$). However, morbidity rates did not differ significantly in secondary occlusion group according to the timing of the surgery. Bronchopulmonary dysplasia was one of the significant predictors of in-hospital survival ($p=0.000$).

Conclusion

Secondary occlusion of PDA in neonates is associated with higher incidence of bronchopulmonary dysplasia, which is one of the predictors of survival. Early primary closure of PDA may improve respiratory outcomes of preterm neonates.