were recorded before and after receiving transfusion. BP was measured using standard non-invasive oscillometric technique before performing every echocardiographic assessment. A single investigator using Philips HD-11 machine performed the haemodynamic assessments utilising standard echocardiographic and Doppler techniques. Ethics approval was obtained & statistical analysis performed utilising SPSS17.0 software.

Results: Complete data on 288 measurements was available for analysis (Table 1). The mean gestation of study infants was 26 weeks and birth weight 863 gram. Of these, 70% infants were on respiratory support at the time of study.

Table1: Pearson's correlation coefficient comparing variables(*p< 0.01)

	LVCO	RVO	SVC FLOW	SYS-TOLIC BP	MEAN BP	DIAS-TOLIC BP
LVCO	1	.494*	.508*	.236	.124	-.006
RVO	.494*	1	.477*	.196	.187	.132
SVC FLOW	.508*	.477*	1	.417*	.267	.123
SYS-TOLIC BP	.236	.196	.417*	1	.809*	.653*
MEAN BP	.124	.187	.267	.809*	1	.898*
DIAS-TOLIC BP	-.006	.132	.123	.653*	.898*	1

[Table 1: Pearson's correlation coefficient compari]

Conclusions: Systolic BP has significant correlation with SVC flow, and a significant positive correlation exists between SVC flow, LVCO & RVO. There is no correlation between mean BP and SVC flow, LVO or RVO.

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CARDIOPROTECTIVE EFFECTS OF CYCLOSPORINE IN A NEWBORN PIGLET MODEL OF ASPHYXIA: A DOSE-RESPONSE STUDY

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Introduction: Myocardial depression following asphyxia of the newborn is a significant cause of mortality. Cyclosporine reduces myocardial damage in adult patients undergoing percutaneous coronary intervention for myocardial infarction. However, the potential cardioprotective effects of cyclosporine in neonates have not yet been studied. We hypothesize that cyclosporine in asphyxiated newborn piglets will improve cardiac function, systemic hemodynamics and oxygen metabolism.

Methods: Thirty-six piglets (1-4 days-old) were instrumented for continuous monitoring of cardiac output and systemic arterial pressures. After stabilization, normocapnic alveolar hypoxia (10-15% oxygen) was instituted for 2h followed by reoxygenation with 100% oxygen for 0.5h, then 21% for 3.5h. Piglets were block randomized to receive one of three cyclosporine intravenous boluses (2.5, 10 or 25 mg/kg) or placebo (normal saline, control) after 5 minutes of 100% reoxygenation (n=8/group). Blood samples were collected for analysis of blood gases and plasma troponin. Statistical analysis performed using ANOVA.

Results: All piglets demonstrated cardiogenic shock (cardiac output 45% of baseline), hypotension (systemic arterial pressure 30mmHg) and acidosis (pH=7.04) at the end of 2h of hypoxia. Cyclosporine treatment at reoxygenation caused dose-related improvements in cardiac output and oxygen delivery compared to controls (both P< 0.05). Cyclosporine at 10 mg/kg significantly improved stroke volume compared to controls, demonstrating preservation of cardiac function. Plasma troponin, a marker of myocardial damage, was significantly higher in controls than that of 2.5 and 10 mg/kg cyclosporine treatment groups.

Conclusion: We first demonstrated that the post-resuscitation administration of cyclosporine caused dose-related preservation of cardiac function in newborn piglets following asphyxia-reoxygenation.