

(13, cerclage; 25, no-cerclage, $p=0.046$). Of the 262 survivors, the mean birth GA for the cerclage group, 36.2, was similar to the no-cerclage group, 35.7 ($p=0.3$), and 87 were admitted to the NICU. The remaining 175 went to a continuing care nursery, and none experienced any components of the NN composite. Of those admitted to NICU, the mean birth GA for the cerclage and no-cerclage groups were 32.3 and 31.5 wks respectively ($p=0.35$). Rates of composite morbidity, NICU admission and components of the composite morbidity are shown in the Table.

CONCLUSIONS: Ultrasound-indicated cerclage for CL<25 mm was associated with a null effect on NN composite morbidity in surviving infants.

Outcome (N=262)	Cerclage (52%)	No-cerclage (48%)	p
Composite Morbidity	13 (10%)	15 (12%)	0.57
Severe RDS	10 (7%)	10 (8%)	0.89
Chronic lung Disease	7 (5%)	6 (5%)	0.86
Sepsis	4 (3%)	8 (6%)	0.20
NEC	1 (1%)	1 (1%)	1.00
Grades 3-4 IVH	0 (0)	1 (1%)	0.48
NICU admission	34%	33%	0.76
Mean NICU Stay (days)	31.7 (35.4)	37.1 (31.9)	0.46

30 New thresholds for significant intratwin growth discordance: results of the prospective multicenter ESPRIT study

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OBJECTIVE: To determine the level of intratwin birthweight (BW) discordance at which perinatal mortality and severe morbidity increase in monozygotic and dizygotic twin pregnancy.

STUDY DESIGN: This prospective multicenter study included 1028 unselected twin pairs recruited over a 2-year period in one country. All participants underwent 2-weekly intensive sonographic surveillance by a team of highly-trained sonographers, from 24 weeks' gestation, with surveillance of monozygotic (MC) twins 2-weekly from 16 weeks. All perinatal outcomes were entered onto a central consolidated database. Analysis using Cox proportional hazards was conducted to compare perinatal mortality and a composite measure of perinatal morbidity (respiratory distress syndrome/ hypoxic ischemic encephalopathy/ periventricular leukomalacia/ necrotizing enterocolitis/ sepsis) at different degrees of birthweight discordance, with adjustment for chorionicity and gestational age at delivery.

RESULTS: Complete study data was available for 1001 women. Chorionicity was assigned as mono- or dizygotic (DC) in 19% (192/1001) and 81% (809/1001) of pregnancies, respectively. Pre-viability single or dual fetal demise was identified in 24 pairs, such that perinatal outcome was recorded for 100% (977) patients who continued the study with both fetuses alive beyond 24 weeks' gestation. Mean BW discordance was 13.2% (range 0.1% to 53%) and 11.4% (range 0% to 58%) for MC and DC twin pairs, respectively. Adjusting for gestational age at delivery, perinatal mortality, individual and composite perinatal morbidity were all seen to increase in association with intratwin birthweight discordance in excess of 14% for monozygotic pairs (Hazard ratio=2.04, $p=0.006$) and 17% for dizygotic pairs (Hazard ratio=2.08, $p<0.0001$).

CONCLUSIONS: The degree of intratwin birthweight discordance which serves as an independent predictor of perinatal mortality or severe morbidity is 14% for monozygotic pairs and 17% for dizygotic twins. This threshold for significant discordance is considerably lower than that defined by retrospective series as pathologic.



Figure 1: Kaplan-Meier morbidity-free survival curves

31 Effects of a shoulder dystocia management protocol on the incidence of brachial plexus injury

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OBJECTIVE: To determine whether implementation of a Shoulder Dystocia (SD) management protocol (Code D) reduces the incidence of obstetric brachial plexus injury (OBPI).

STUDY DESIGN: After implementation of mandatory Shoulder Dystocia training to all labor and delivery staff, the incidence of OBPI was compared between pre-training (no Code D) (August 2003 to August 2006; $n = 83$) and post-training (Code D) (September 2006 to September 2008; $n = 54$) periods, in deliveries complicated by SD (n =number of cases of Shoulder Dystocia). SD management techniques and incidence of OBPI were compared using both univariate and multivariate analyses.

RESULTS: There were 6,192 and 3,240 deliveries in the study groups during pre-training and post-training periods, respectively. There was a significant overall reduction of incidence of OBPI from 0.4% (25/6192) before Code D to 0.19% (6/3240) after Code D implementation ($p=0.02$). As well, the rate of OBPI during SD dropped from 30% (25/83) to 11% (6/54) with Code D ($p<0.01$). There was a significant decrease in maternal BMI ($p=0.01$) and fetal weight ($p=0.02$) and an increase in the rate of Shoulder Dystocia ($p=0.05$ reaching statistical significance) in Code D group. This suggests that due to a heightened awareness of Shoulder Dystocia the diagnosis is made more frequently and more quickly after Shoulder Dystocia Training. There was significant decrease ($p<0.05$) in the use of McRobert's Maneuver and increase in lateral position ($p<0.05$) with Code D. There is no significant difference in gestational age at delivery, number of induced and augmented labors and epidural anesthesia in both the groups. As anticipated, the head to body delivery time increased from 1.51min (SD=1.37) to 2min (SD=1.34) in Code D group. After regression analysis, only Code D remained associated with reduction of OBPI ($p=0.04$).

CONCLUSIONS: A SD management protocol for maternity staff appears to increase awareness of Shoulder Dystocia. More importantly, it reduces the overall incidence of OBPI in our patients and also reduces the incidence of OBPI in births complicated by SD.