EFFECT OF CORD PH AND BASE DEFICIT ON APGAR SCORE, NEED FOR INITIAL VENTILATION AND ENCEPHALOPATHY IN INFANTS ≥ 35 WEEKS GESTATION, WITH CORD PH < 7.0 .

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Introduction: Cord pH < 7.0 and base deficit (BD) of ≥ 12 are associated with risk of neonatal encephalopathy. There is limited information about the relationship between degree of acidosis, condition at birth and short term outcome when pH < 7.0 .

Methods: Cord blood gas data were downloaded from the gas analysers in the delivery suite of the Simpson Centre for Reproductive Health, Edinburgh, between Jan 2005 and May 2010 for infants born ≥ 35 weeks gestation with pH < 7.0 . A single sample was included per infant, with the more acidotic specimen selected from paired specimens. Apgar scores at 1 and 5 minutes, need for IPPV during initial stabilisation, neonatal encephalopathy and neonatal mortality were extracted from the clinical records. These were categorised by degree of acidosis.

Results: There were 31151 births during the study. Cord pH < 7.0 was documented in 249 infants ≥ 35 weeks gestation. Data are n, median (interquartile range) and %.

pH	6.9-7.0	6.8-6.89	< 6.8	B.D.	≤ -12	-12 to -16	> -16
n	196	38	15		135	81	33
Apgar 1	6(4-8)	4(3-6)	2(1-5)		6(4-7)	5(3-7)	3(1-5)
Apgar 5	9(8-9)	7(6-9)	4(1-7)		9(8-9)	9(7-9)	6(4-9)
IPPV	56%	78%	93%		61%	56%	81%
HIE	6%	37%	67%		4%	16%	52%
Death	1	0	3		0	1	3

[table 1]

Conclusions: In infants with cord pH < 7.0 there is a dose dependent relationship between degree of acidosis, neurological depression at birth and adverse short term outcome.