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PANCURONIUM BROMIDE DURING MECHANICAL VENTILATION IN PRETERM INFANTS (BW ≤ 1500 g) WITH RDS.

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Pancuronium bromide during IPPV has been recommended as a means of reducing pneumothorax, fluctuations in cerebral blood flow velocity and ICH in newborns with RDS. Thirty-three preterm infants, requiring ventilation for severe RDS were randomly assigned to control and treatment groups. Group 1 (BW 1035 ± 197 g; G.A. 28,1 ± 1,86) breathed spontaneously. Group 2 (BW 1205 ± 164 g; G.A. 28,8 ± 1,76) was paralyzed with pancuronium bromide 0,1 mg/kg IV, PRN. IMV in the first group and IPPV in the second (Bear BP 2001) were used to mantain a PaCO2 ≤ 45 mmHg and a PaO2 ≥ 50 mmHg.
The infants were kept muscle relaxed until they needed a FiO2 ≤ 0.4 and PI ≤ 15 cm H2O.

	Group 1 (n=14)		Group 2 (n=17)		P (Fischer)
PVH-IVH	7	(43,7%)	9	(52,9%)	ns
PVL	3	(18,7%)	3	(17,6%)	ns
PNEUMOTHORAX	3	(18,7%)	5	(29,4%)	ns
BPD	3	(18,7%)	3	(17,6%)	ns
MORTALITY	5	(31,2%)	9	(52,9%)	ns

No significant difference in the incidence of major ICH, periventricular leukomalacia, pneumothorax, BPD, and mortality was found. Our data show no advantages using pancuronium bromide during mechanical ventilation in preterm newborn with RDS.

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INVESTIGATION OF THE SIDE-EFFECTS OF PANCURONIUM IN PRETERM VENTILATED NEONATES.

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The possible cardiovascular and renal effects of pancuroniumwere investigated by comparing results from 18 infants selectively paralysed to prevent pneumothoraces (1) and 11 control infants, non-paralysed matched for gestational and postnatal age. There was no significant difference in blood pressure (BP) comparing measurements immediately before and 15 and 30 minutes after paralysis, neither was there a significant difference in BP between the two groups during the first 7 postnatal days. During paralysis there was a complete loss of beat-to-beat variation on the continuous heart rate recordings, this was not seen in any of the controls. Despite increasing fluids from a mean of 40-160 mls/kg in the control group in the first week there was a steady weight gain (approx 10% of birth weight by day 7). However, amongst paralysed babies, despite relative fluid restriction (increasing fluids from 40-100mls/kg only by day 7) weight loss did not occur and the group was above birth weight by day 7. In the paralysed babies there was an increasing urine osmolality on day 3 and 4 and peripheral oedema. No paralysed baby died, or developed either a pneumothorax or renal failure.. We conclude selective paralysis is an effective method of preventing pneumothoraces (1) but is associated with fluid retention.

(1) Greenough A.et al Lancet, i, 1-4, 1984

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DEVELOPMENTAL CHANGES OF LATENCY AND UDP-N-ACETYLGLUCOSAMINE (NAG) EFFECT ON HEPATIC UDP-GLUCURONYLTRANSFERASE (UDP-GT) IN RAT LIVER INTACT MICROSOMES.

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Membrane bound-luminally oriented hepatic UDP-GT is largely unexpressed in liver intact microsomes,and is fully revealed by pretreatment with membrane perturbing agents (latency). Whether the response of UDP-GT to these agents changes during development is poorly known,besides the few existing studies having been carried out without monitoring of microsomal structural integrity.We examined the response of UDP-GT (naphtol as substrate) to a detergent (CHAPSO) and to the putative physiological cofactor NAG in developing rat liver microsomes. Phospholipid (PL) membrane content,and 2 independent parameters of membrane integrity,i.e. latency of low Km microsomal marker Man6Pase and permeability to EDTA,were also assessed. RESULTS(*p<0.05:developing vs adults)

	MAN6Pase (%non latent;nv<5%)	EDTA perm (%;nv<25%)	Prot/PL (ratio)	UDP-GT NAG+ (fold incr)	UDP-GT CH- (fold incr)
0days (n=4)	2.1±0.5*	26±4	4.8±0.7*	0.9±0.3*	2.6±1.0*
7days (n=4)	1.4±0.3	18±1*	3.7±0.2*	1.7±0.4*	5.7±0.8*
21days (n=4)	1.2±0.1	ND	3.5±0.3	2.5±0.6	13.0±1.8*
Adults (n=4)	1.3±0.1	22±2	3.3±0.2	3.3±0.7	10.1±0.9

CONCLUSION We have shown in rat liver intact microsomes that response of UDP-GT to both NAG and detergent activation undergoes major changes during development.

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NATURAL HISTORY OF FOOD ALLERGY (FA) IN CHILDREN

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To investigate the natural history of FA, we have followed-up 88 children affected with FA (60 males,28 females,median age at the onset of FA 5 mos). All children had positive challenge tests, skin tests, and RAST to the offending food(s) (OF). The challenge tests showed that the most common OF were cow's milk, egg, wheat, and fish. Atopic dermatitis (AD), asthma, angioedema, urticaria, and gastrointestinal symptoms were most frequently exhibited.Fish and nuts frequently triggered severe, immediate reactions such as angioedema, while egg ingestion was frequently associated with AD ($p < 0.001$). At the last follow-up (median age 9 yrs) the challenge tests showed that only 28% of children tolerated the OF, and 56% of them developed other allergies ($p < 0.05$).Angioedema and AD, alone or variously combined, were associated with persisting allergy (100, 73, and 85% respectively) ($p < 0.05$). In conclusion our data show that the outcome of FA is not so favourable as generally reported. Different selection criteria of the patients can be responsible of the controversial results so far reported. Therefore the diagnosis of FA should be better defined, in order to avoid conflicting results.