Conclusions: Nowadays, CRIB score has a lower predictive ability for pre-discharge mortality than birthweight and GA combined or than the Neocosur and EuroNeoNet scores. Reasons for this should be explored.

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EFFECT OF OMT ON LENGTH OF STAY AND WEIGHT GAIN IN A POPULATION OF PRETERM INFANTS

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Background and aims: The use of osteopathic manipulative treatment (OMT) in preterm infants has been documented and results from previous studies suggest the association between OMT and length of stay (LOS) reduction, as well as significant improvement in several clinical outcomes.

Aim of the present study is to show the effect of OMT on LOS and daily weight gain in a sample of premature infants.

Methods: Randomized controlled trial on preterm newborns admitted in a single NICU between 2008-2009.

N=101 subjects free of medical complications and with gestational age >28 and < 38 weeks were enrolled and randomized in two groups: study group (N=47) and control group (N=54).

All subjects received routine pediatric care and OMT was performed to the study group for the entire period of hospitalization.

Endpoints of the study included differences in LOS and daily weight gain. Statistical analyses were based on univariate tests and multivariate linear regression.

Results: Univariate statistical analysis showed no significant imbalances among treated and control groups in terms of main characteristics measured at admission. After adjusting for all potential confounders, multivariate analysis showed a significant association between OMT and LOS

reduction (mean difference between treated and control group: -6.325 95% c.i. -8.687 - -3.962, p< 0.0001). OMT was not associated to any change in daily weight gain.

Conclusions: The present study suggests that OMT plays an important role in the management of preterm infants hospitalization.

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CHLORIDE BALANCE IN PRETERM INFANTS DURING THE FIRST WEEK OF LIFE

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Background and aims: To describe chloride balance and plasma chloride changes during the first week of life in preterm infants born between 25 and 32 weeks of gestational age (GA), to analyze the association of chloride changes with fluid and electrolyte homeostasis and intake and the possible relationship with postnatal morbidity.

Methods: Prospective observational study. For 7 days after birth, plasma sodium, chloride, potassium, phosphate and total carbon dioxide (tCO₂) were determined daily and the plasma strong ion difference (SID) calculated. Urinary sodium and chloride, urine volume, body weight, fluid and electrolyte intakes were recorded daily. Data on postnatal morbidities were collected.

Results: 107 infants were studied. Plasma chloride percentiles charts were provided from day 1 to 7. Plasma chloride concentration was significantly positively associated with plasma sodium concentration, while urinary chloride excretion did not paralleled urinary sodium excretion. Higher plasma chloride concentration and lower SID were significantly associated with lower plasma tCO₂. Higher chloride intake, hemodynamically significant patent ductus arteriosus (hsPDA), dehydration, lower sodium intake and lower GA were independent factors associated with higher plasma chloride. Higher chloride intake, lower GA and lower sodium intake were independent factors associated with lower plasma tCO₂ at the multivariate analysis.

Conclusion: In infants born at very low GA clinician should look carefully at chloride intake