

## MP3-1

### Evolution of NT-proBNP in the first 28 days of life in very low birth weight infants

Zafra P., Méndez P., Benavente I., Lubián S.P.  
HU Puerta del Mar, Cádiz, Spain

#### OBJECTIVES

To examine the evolution of plasmatic levels of N-terminal cerebral natriuretic propeptide (NT-proBNP) in the first 28 days of life of very low birth weight infants (VLBWI) both in the presence and absence of ductus arteriosus

#### METHODS

Prospective study including VLBWI with birth weight  $\leq 1500$  grams and / or  $\leq 32$  weeks of gestational age (GA) admitted to the Neonatal Intensive Care Unit from 2015 to 2017. Weekly echocardiograms and biochemical determination of plasma NT-proBNP (pg/ml) were made during the first 28 days of life. NT-proBNP levels were longitudinally analyzed and correlated to echocardiographic parameters accounting for the presence of patent ductus arteriosus (PDA).

#### RESULTS

We included 101 preterm with a mean GA of 28.85 weeks ( $\pm 1.85$  SD) and mean birth weight of 1152 grams ( $\pm 247.4$  SD). A total of 139 NT-proBNP determinations were performed.

In the first 24 hours there is no difference in the plasmatic level of NT-proBNP in those patients who present with PDA 5,246 ng/dL (1,574 - 22,390) compared to those with no PDA 6,437 ng/dL (1,300 - 14,444) ( $p = 0.49$ ).

At 3, 7, 14 and 21 days of life patients with PDA had higher NT- proBNP values compared to those with no PDA. NT-proBNP plasmatic levels follow a different evolution in both groups: those VLBWI with PDA were found to have a progressive increase in NT-proBNP levels with a maximum peak at 7 days of life while in those with no PDA NT- proBNP levels decrease progressively with a nadir at 28 days of age (685.52 ng/dL). At 28 days of age we found no difference between both groups.

#### CONCLUSIONS

NT-proBNP levels in the first day of life and at 28 days of life cannot be considered a marker of PDA in VLBWI. At 7 days of life NT-proBNP levels differed the most in both groups. Importantly, in VLBWI with PDA, NT-proBNP levels also decrease over time.

