

BACKGROUND

Eosinophilia (Eo) is common in premature infants and frequent in the neonatal period and its incidence is around 70% in gestational age (GA) below 27 weeks. Its cause and clinical significance remains unknown. Studies do not correlate the factors and causes of Eosinophilia and Very Low Birth-weight (VLBW) infants.

Aims: Investigate the incidence and patron of Eosinophilia in VLBW, associated factors and its variations in time, severity of illness and clinical conditions associated.

METHODS

Analysis of the medical records of VLBW admitted at neonatal intensive care unit of Hospital de Santa Maria – Lisbon, from Jan 2012 to Dec 2014 (n= 125).

Excluded dead < 28 days, infants with less than 4 completed blood counts (CBC) and admitted > 14 days.. Collected CBC for 6 weeks including differential leukocyte count (neutrophil and eosinophil) and clinical conditions (steroids and mechanical ventilation). **Eosinophilia** was defined as: Mild ($700 - 999 \times 10^6/L$), Moderate ($1.000 - 2.999$) and Severe ($> 3000 \times 10^6/L$). Data analyzed using SPSS. Statistic significance $p < 0.05$.

RESULTS

	With Eo	Without Eo	Average
Total	32,9%	67,1%	88
Male (%)	10,3	89,7	4,3
G. Age (w)	28,1	27,9	27,8
Birth weight (g)	1179 +/-247	1239 +/-247	1192 +/-198
Apgar (1')	7 (4-9)	7 (2-9)	7 (4-9)
Apgar (5')	8 (6-10)	9 (5-10)	9 (5-10)

Chart 1: Eosinophilia variation in weeks

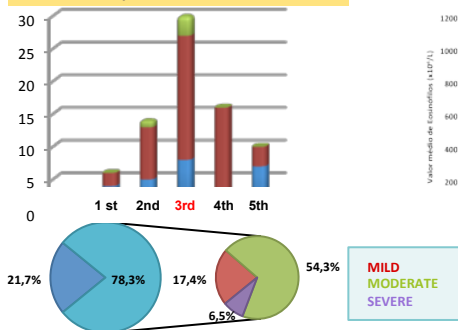


Chart 2: Eosinophilia incidence

Chart 3: Correlation Eosinophilia and BDP

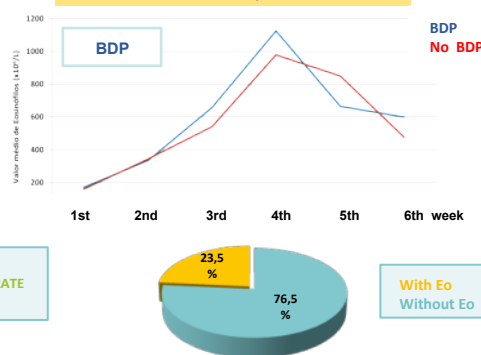


Chart 4: Correlation Eosinophilia and Sepsis

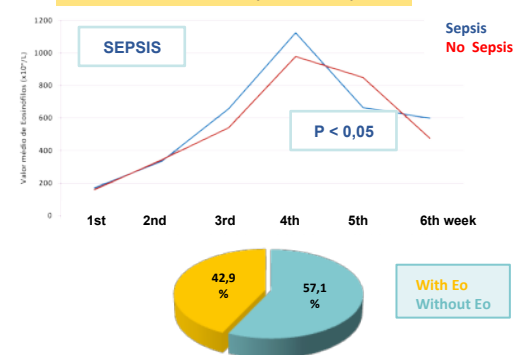


Table 1: Patron according to factors

CONCLUSION

Eosinophilia is common in the VLBW, 78,3% presented it at least once and occurs mainly in the third week of life. High count of eosinophil seems to be correlated with clinical sepsis.

Infants with Bronchopulmonary Dysplasia also had eosinophilia but no significant differences were found. Probably it may not correspond to a real eosinophilia for laboratory cut off levels are established for adults. More and prospective studies are necessary to understand this relation and to determine the most appropriate values for VLBW.