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CONGENITAL DIAPHRAGMATIC HERNIA: 15 YEAR-EXPERIENCE IN A PEDIATRIC INTENSIVE CARE UNIT

J. Pimenta¹, P. Silva², C. Pinto¹, F. Neves¹

¹PICU, ²Cardiology, Hospital Pediatrico de Coimbra, Coimbra, Portugal

Background and aims: congenital diaphragmatic hernia (CDH) is a rare malformation with a high mortality rate. Prenatal diagnosis is essential in defining the optimal perinatal therapeutic strategy. All cases of Portugal's Central Region have been referred to PICU of Coimbra's Pediatric Hospital (CPH). The aims were to determine the incidence of CDH, to characterize the newborns (NB) with CDH admitted to the PICU, to evaluate the mortality and its evolutionary pattern.

Methods: a retrospective, study analysis made up of children with CDH was undertaken in a 15 year period. Based on the admission' year, two groups were formed: group A (1995-2001) and group B (2002-2009), where the newborns' characteristics, therapeutic strategies, prognostic factors and mortality were compared.

Results: the mean annual incidence was 2.2 per 10.000 live-newborn. Of the 60 NB admitted to the PICU-CPH, 48.7% were prenatally diagnosed, 38% had associated malformations and 23.3% had a right-sided defect. 71.7% were born in perinatal tertiary referral centre. Regarding prognostic factors, newborns' characteristics and underlying therapeutic strategies, no statistically significant differences were observed between the two study groups. Prenatal diagnosis was made in 37.5% in the group A and 52.8% in the group B cases ($p=0.369$). The mortality in group A (29%) was significantly higher than in group B (5%; $p=0.032$).

Conclusions: a significant decrease in mortality was observed in the two periods of the study, and that can be partially explained by prenatal diagnosis, which led to an in perinatal care.

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INFANTS WITH BIRTH WEIGHT LESS THAN THE 0.4TH CENTILE HAVE HIGH RATES OF DISABILITY AND POOR GROWTH AT 2 YEARS

R. Chaudhary¹, V. Palanivel², A. Curley¹,
A. Damore¹, East Anglian VLBW project

¹NICU, ²Addenbrookes Hospital, Cambridge, UK

Background: Survival of very low birth weight (VLBW) infants has increased. Within this cohort infants born less than the 0.4th centile are a high risk group. Studies of this subgroup have been small and have suggested these infants are at increased risk of long term neurodevelopmental problems.

Methods: Clinical and 2 year outcome data were collected on all VLBW infants < 0.4th centile born between 1993 to 2002 from a regional database

Results: 128 infants were born below 0.4th centile (median gestational age 34, range 24-39 weeks). 43% had some disability with 23% having moderate to severe disability. 3% had cerebral palsy (2 diplegia, 1 hemiplegia, 1 quadriplegia). 11% had motor impairment. 35% had sensory impairment, 47% of these were moderate to severe. 56% required readmission within the first 2 years (median: 2, range: 1 to 9). 13 % had three or more admissions. 58% were referred to one or more community services. Eleven different community services were involved in this. In terms of growth 16% of babies were still below the 0.4th centile and 59% were below the 9th centile at two years of age. Head circumferences were noted to be below the 9th centile at 2 years in 72% babies.

Conclusion: Despite greater gestational age this cohort has higher rate of disability at 2 years (23%) than the overall VLBW group (19%). Many infants born below 0.4th centile have long term health problems and significant health service requirements. Systemic and head growth remain poor at 2 years of age.