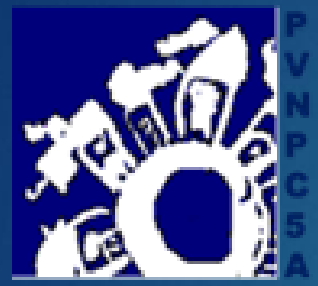

POSTNEONATAL CEREBRAL PALSY ACCORDING TO THE NEW SURVEILLANCE OF CEREBRAL PALSY IN EUROPE CLASSIFICATION

DATA FROM THE PORTUGUESE CEREBRAL PALSY SURVEILLANCE PROGRAM

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AFFILIATED TO **SURVEILLANCE OF CEREBRAL PALSY IN EUROPE**

POSTNEONATAL CEREBRAL PALSY ACCORDING TO THE CLASSIFICATION OF PRIMARY EVENTS CONTRIBUTING TO POSTNEONATAL CEREBRAL PALSY (CEC-PNCP)

- **Background**
  - *The Portuguese National Surveillance of Cerebral Palsy (PVNPC) registers **clinical, epidemiological, and functioning data** of children with cerebral palsy (CP) at 5-8 year old, born in the 21 st century.*
  - *The Surveillance of Cerebral Palsy in Europe (SCPE) recently published the **classification of primary events contributing to postneonatal cerebral palsy (CEC-PNCP)** in whose validation process the PCPSP contributed with part of the cases reported.*

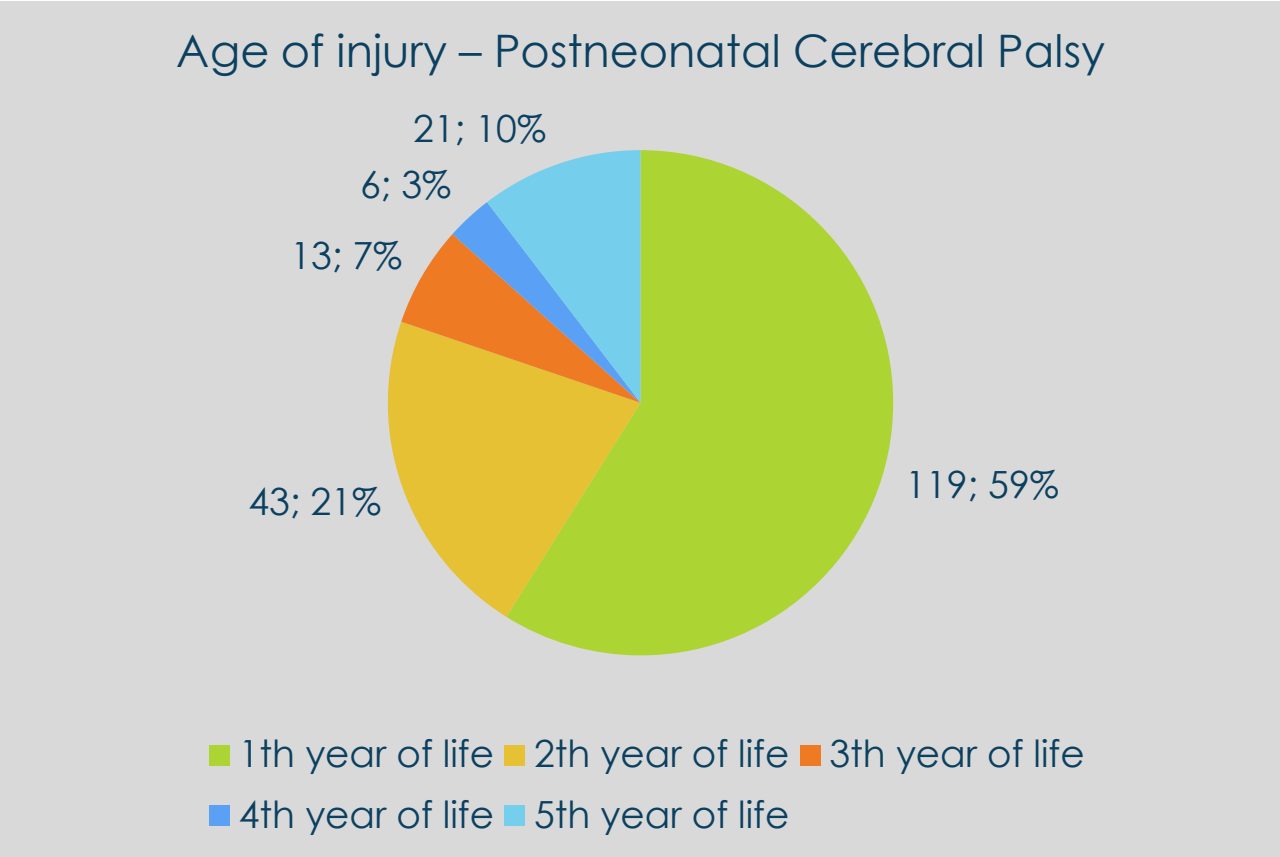
- **Objectives**
  - *To describe and analyze all portugueses cases of post-neonatal cause, according to the SCPE (CPEC-PNCP).*

POSTNEONATAL CEREBRAL PALSY ACCORDING TO THE CLASSIFICATION OF PRIMARY EVENTS CONTRIBUTING TO POSTNEONATAL CEREBRAL PALSY (CEC-PNCP)

- **Materials/Methods**
  - *PVNPC actively registers CP children at 5-8 years-old,* ***following the common Surveillance of Cerebral Palsy in Europe protocol****, including CP definition and classification, neuroimaging, and associated impairments; it additionally uses two 5-level classifications, the Complexity Score and the Educational Inclusion Classification scale.*
  - ***Children with post-neonatal cause (PNCP) born between 2001-2015 and reported to the PVNPC between 2006-2024 at living in Portugal at 5-8 years*** *were analysed acording the CEC-PNCP.*
  - *Background characteristics, clinical and functional assessments were compared according to the* ***Classification of primary events contributing to postneonatal cerebral palsy (CEC-PNCP)***
  - *Proportions were described with 95% confidence interval.*
  - *Univariate Chi-square test was used to assess associations.*

POSTNEONATAL CEREBRAL PALSY ACCORDING TO THE CLASSIFICATION OF PRIMARY EVENTS CONTRIBUTING TO POSTNEONATAL CEREBRAL PALSY (CEC-PNCP)

- **Results**
  - *Out of 2276 children with CP, 203 (9%) had Postneonatal Cerebral Palsy (PNCP);*
  - *Age of injury between 1-59th month of life, almost (80%) up to 24th months;*



POSTNEONATAL CEREBRAL PALSY ACCORDING TO THE CLASSIFICATION OF PRIMARY EVENTS CONTRIBUTING TO POSTNEONATAL CEREBRAL PALSY (CEC-PNCP)

- **Results**
  - *CPEC-PNCP:*
    - *A-Infections (CA-I) 84 cases (41%);*
    - *B-Head Injury (CBI-T) 22 (11%)*
    - *C-Brain Injury related to medical procedure (CC-IRMP) 44 (22%); ,*
    - *D-Cerebrovascular accident (CD-CVA), 30 (15%)*
    - *E-Hypoxic Brain Damaging (CE-HBD); 14 (7%):*
    - *F-Miscellaneous (CF-M); 9 (4%).*

	Nº	%	IC (95%)
A. Infection	84	41,4	34,6 - 48,2
A.1 Encephalitis and/or meningites	59		
A.2 Severe sepsis, septicaemia, or septic shock	5		
A.3 Other infections and consequences.	20		
B. Head injury	22	10,8	7,2 - 15,8
B.1 Road traffic accident	5		
B.2 Other accidental injury	6		
B.3 Non-accidental injury	4		
B.4 Unspecified	7		
C. Brain injury related to surgery or other medical intervention	44	21,7	16,6 - 28,0
C.1 Cardiac	21		
C.2 Brain	12		
C.3 Other organs	2		
C.4 Unspecified	9		
D. Cerebrovascular accident	30	14,9	10,5 - 20,4
E. Hypoxic brain damaging event of other origin	14	7,0	4,0 - 11,1
E.1 Near-miss sudden infant death syndrome	0		
E.2 Near-drowning	4		
E.3 Respiratory distress syndrome of non-infectious origin	2		
E.4 Cardiac arrest and heart infarction	7		
E.5 Hypoxic of other origin or unspecified	1		
F. Miscellaneous	9	4,0	1,9 - 7,4
F.1 Status epilepticus, convulsions	6		
F.2 Other	3		

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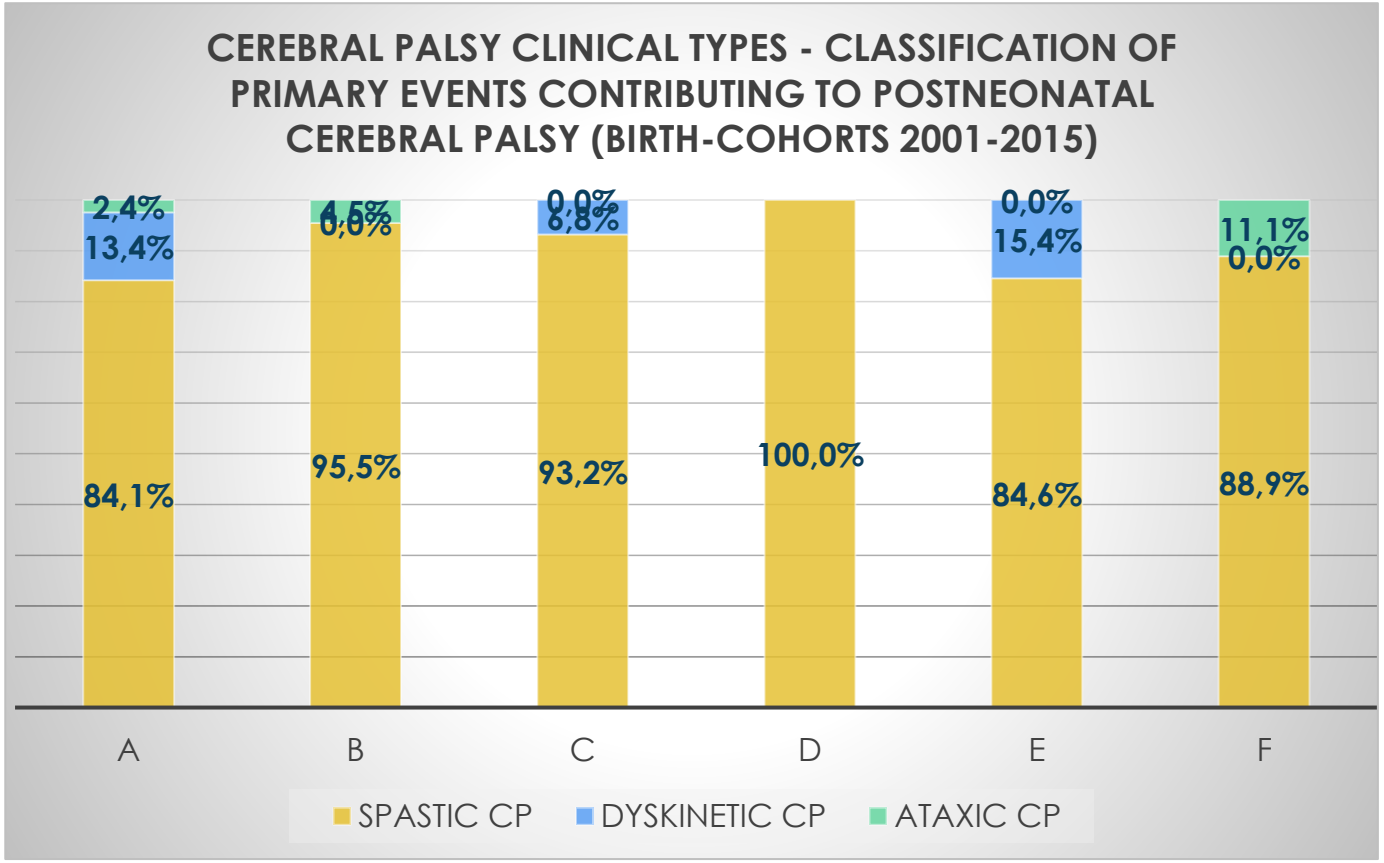
- **Results**
  - *Spastic Cerebral Palsy (SCP) was the most frequently recorded clinical type, ranging from 100% in CD-CVA to 84.1% in CA-I.*
  - *Dyskinetic Cerebral Palsy (DCP) was more common in*
    - *CE- HBD (15.4%);*
    - *CA-I (13.4%),*
  - *Ataxic Cerebral Palsy (ACP) was more common in*
    - *CF-M (11.1%) (p0.102).*



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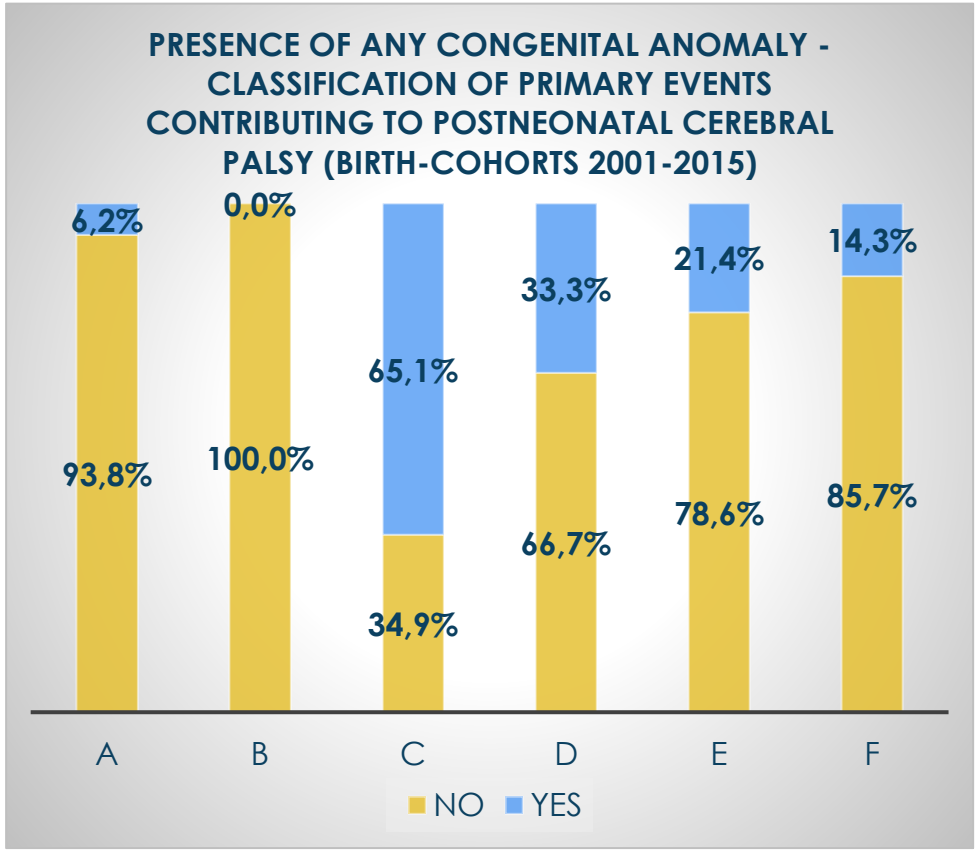
POSTNEONATAL CEREBRAL PALSY ACCORDING TO THE CLASSIFICATION OF PRIMARY EVENTS CONTRIBUTING TO POSTNEONATAL CEREBRAL PALSY (CEC-PNCP)



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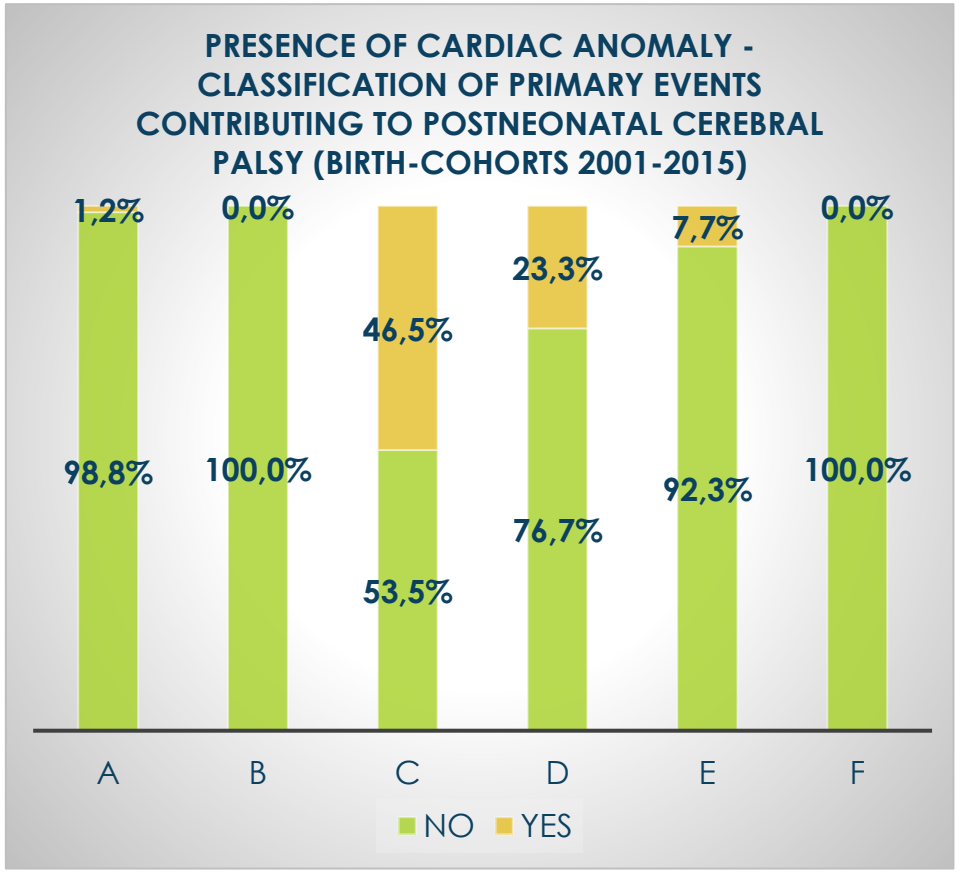
Results

- *The presence of any congenital anomaly (CA) was confirmed in 47/197 children (23.9%).*
  - *CC- IRMP registed the highest proportion of CA (65.1%), followed by CD-CVA (33.3%) and CE- HBD (21.4%).*
  - *The cardiac CA subtype (ICD-10-Q2) registed 46.5% in CC-IRMP and 0% in CB-TBI and CF-M*



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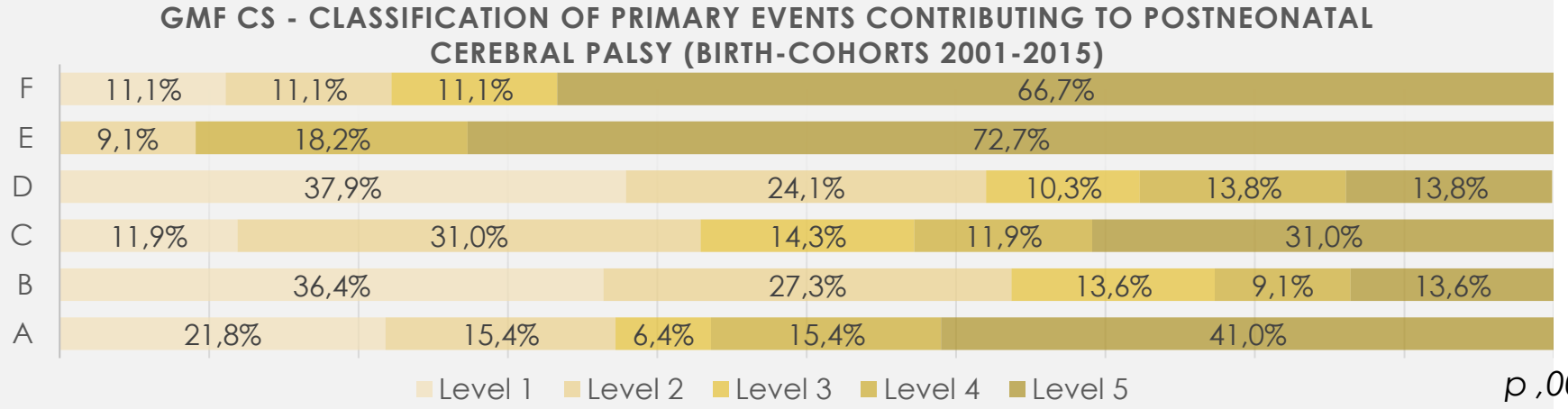
POSTNEONATAL CEREBRAL PALSY ACCORDING TO THE CLASSIFICATION OF PRIMARY EVENTS CONTRIBUTING TO POSTNEONATAL CEREBRAL PALSY (CEC-PNCP)

- **Results**
  - *class with the best functional record:*
    - *CB-TBI*
      - *(GMF-I-II: 63.7%);*
      - *(BFMF-I-II 57.1%);*
  - *Class with he worst functional record:*
    - *CE- HBD*
      - *(GMF-III-IV-V 90.9%)*
      - *(BFMF-III-IV-V 100%).*



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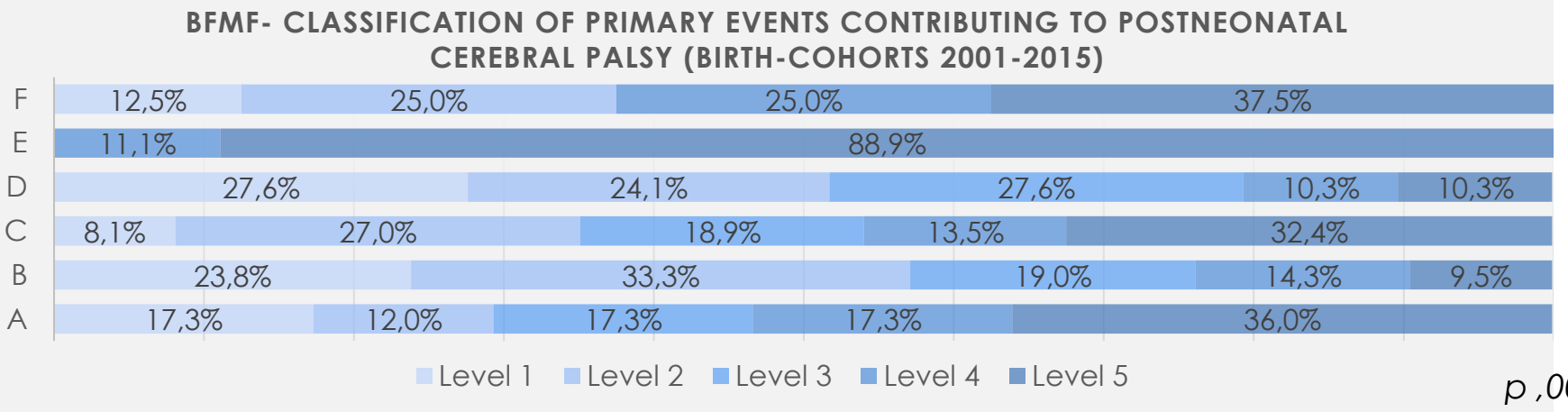

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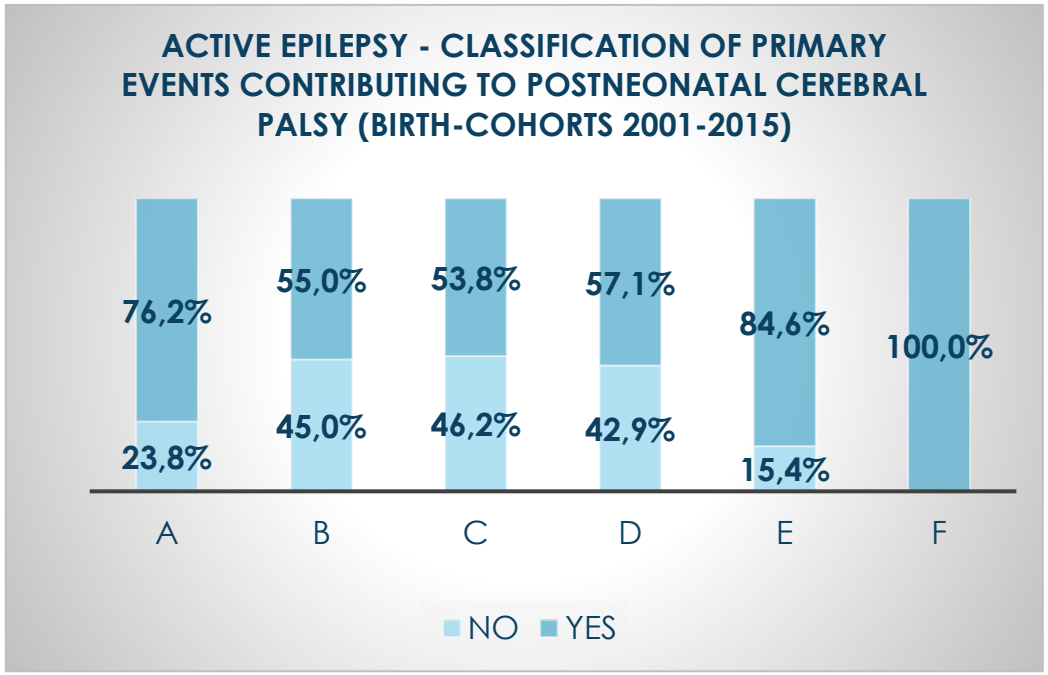
POSTNEONATAL CEREBRAL PALSY ACCORDING TO THE CLASSIFICATION OF PRIMARY EVENTS CONTRIBUTING TO POSTNEONATAL CEREBRAL PALSY (CEC-PNCP)

Results

- *Associated morbidity varied among the different categories.*



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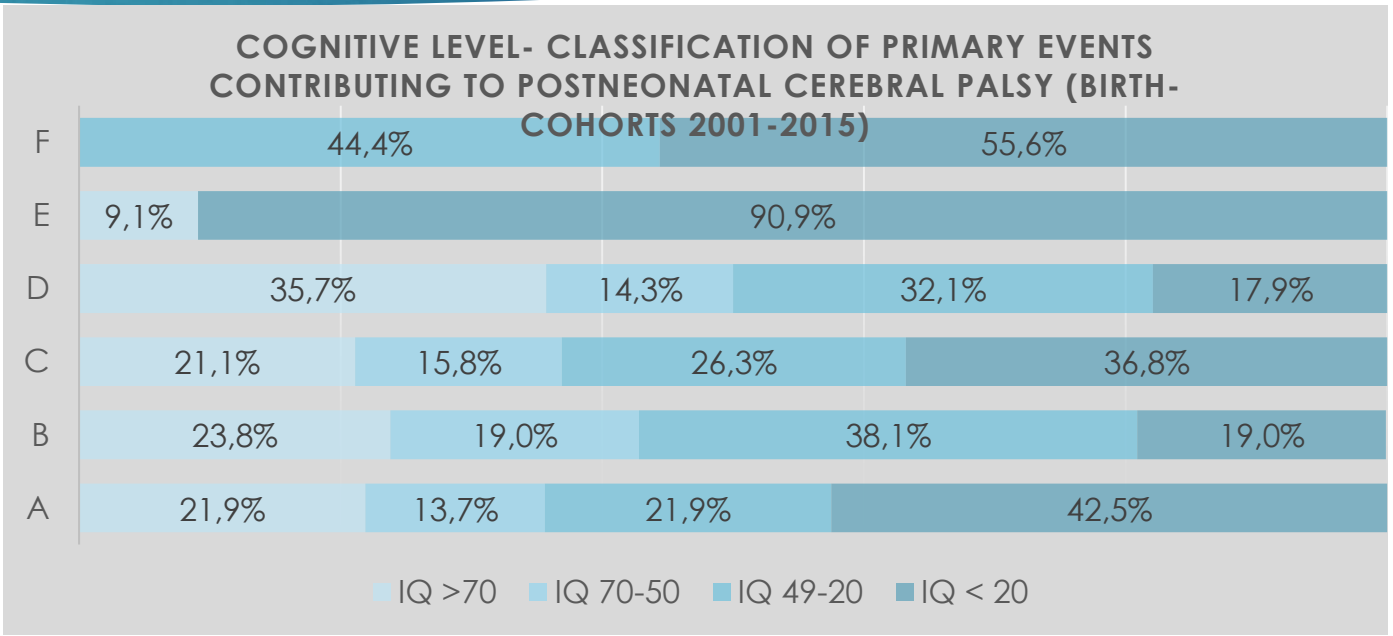

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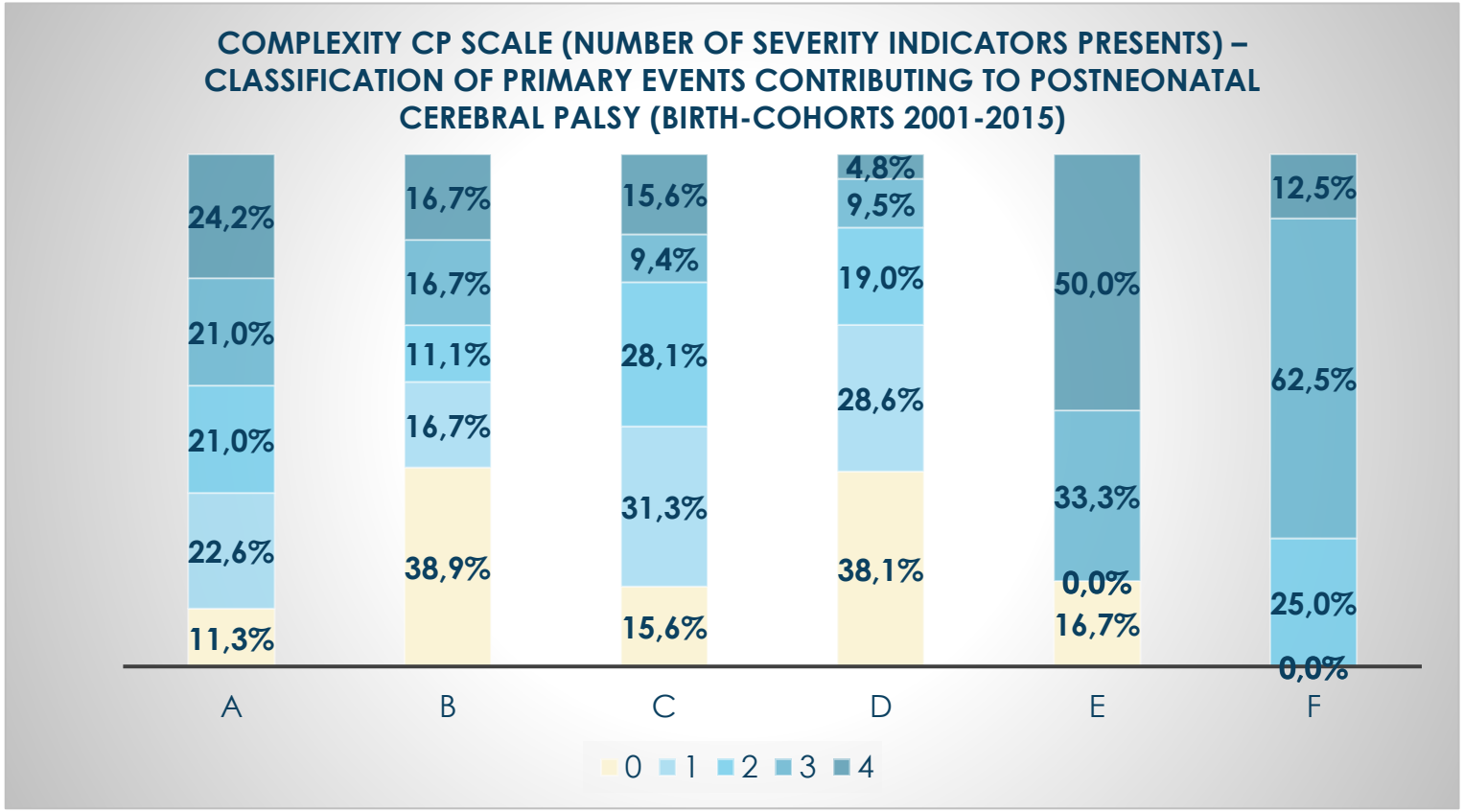
POSTNEONATAL CEREBRAL PALSY ACCORDING TO THE CLASSIFICATION OF PRIMARY EVENTS CONTRIBUTING TO POSTNEONATAL CEREBRAL PALSY (CEC-PNCP)

- **Results**

  - *Complexity CP scale (This scale quantifies the number of severity indicators):*
    - *not walking (GMFCS levels III, IV, V);*
    - *moderate to severe cognitive impairment (IQ <50);*
    - *active epilepsy;*
    - *severe visual and/or hearing impairment.*

No complexity factor present varied between 0.0% and 38.9% (p,011).



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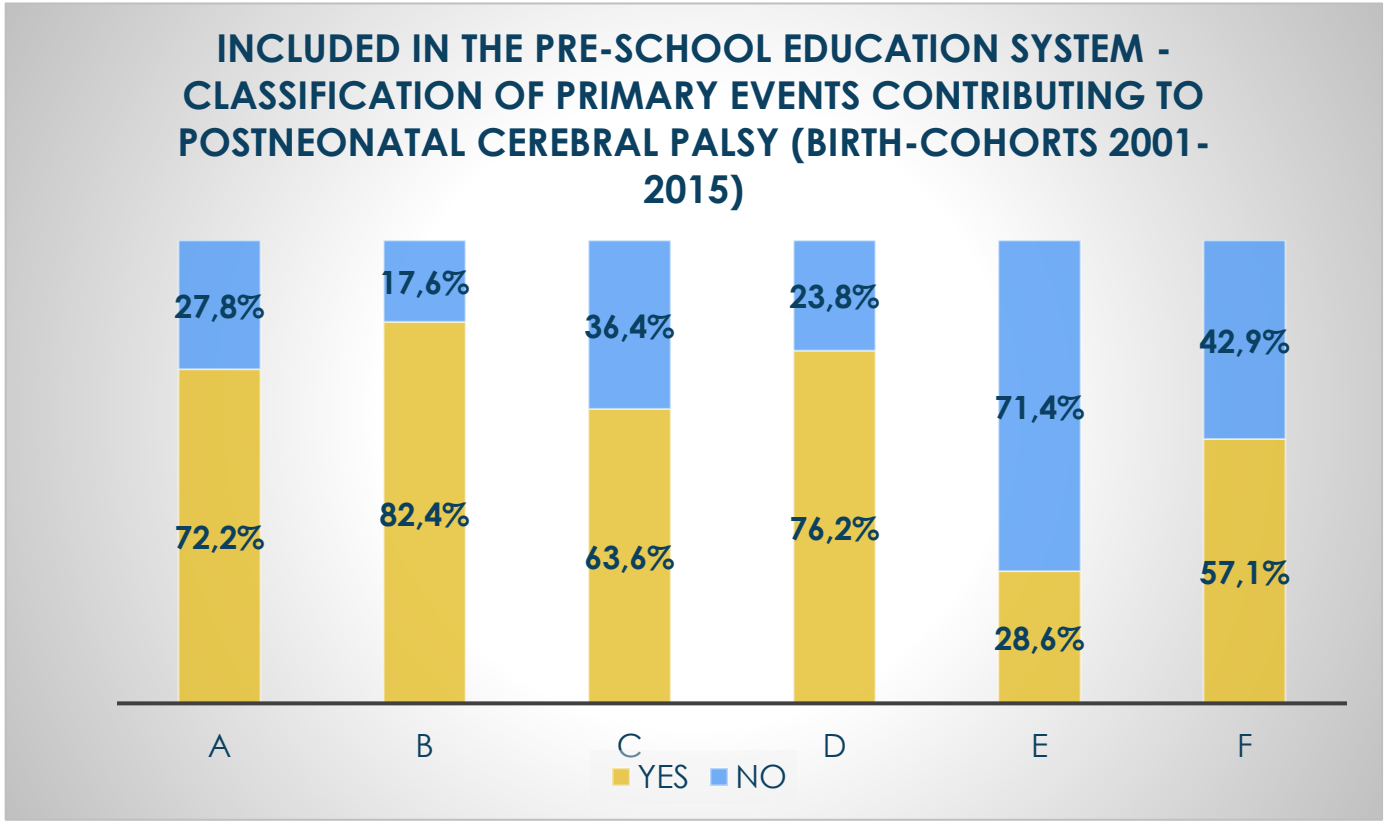
POSTNEONATAL CEREBRAL PALSY ACCORDING TO THE CLASSIFICATION OF PRIMARY EVENTS CONTRIBUTING TO POSTNEONATAL CEREBRAL PALSY (CEC-PNCP)

- **Results**
  - *school inclusion varied among the different categories (not stastically significant)*



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POSTNEONATAL CEREBRAL PALSY ACCORDING TO THE CLASSIFICATION OF PRIMARY EVENTS CONTRIBUTING TO POSTNEONATAL CEREBRAL PALSY (CEC-PNCP)

- **Conclusion**
  - *Children with CP-PNN differ greatly according to the CPEC-PNCP in terms of clinical type, functional skills.*
  - *This classification allows a better characterization of the primary event contributing to post-neonatal etiopathological process, a better understanding and action in the rehabilitation and inclusion processes and provide an opportunity for preventive measures to be implemented.*

OBRIGADA / THANK YOU

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