NEURODEVELOPMENTAL OUTCOME OF FILIPINO CHILDREN DIAGNOSED WITH CONGENITAL HYPOTHYROIDISM (AGED 6 MONTHS - 18 YEARS) AT THE PHILIPPINE CHILDREN'S MEDICAL CENTER

Rorilee P. Quiros-Angeles, M.D. Ma. Paz Irene L. Bautista, M.D.
Marichu P. Mabulac, M.D. Aurora Aurea M. Reyes, M.D.
Child Neuroscience Division, Section of Neurodevelopmental Pediatrics

BACKGROUND

Congenital hypothyroidism (CH) is one of the most common preventable causes of developmental delay in children. In the Philippines it is detected through the newborn screening and has an incidence of 0.038% (1:2,618)[32].

OBJECTIVE

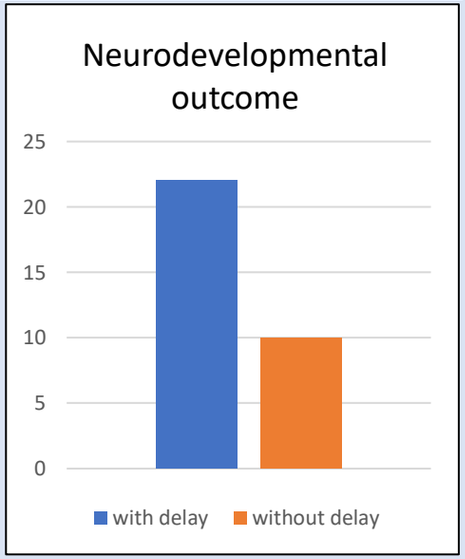
To determine the factors affecting the neurodevelopmental outcome of Filipino children diagnosed with CH.

METHODOLOGY

This is a prospective cross-sectional study of children aged 1.1 year to 16.3 years evaluated either face to face or via telemedicine from February to August 2021. Each subject's socio-demographic and clinical profiles were collected. Vineland—3 was the developmental tool used to determine the subjects neurodevelopmental outcome. Statistical analysis was performed using STATA 15.0 and probability values <0.05 was considered statistically significant.

RESULTS

Significant factors that affected the outcome include: thyrotropin (TSH) level, age at start of treatment, compliance to therapy and subject's classification (pay or service). Subjects with developmental delay had significantly higher TSH levels (median of 100.5 mIU/L vs 36.5 mIU/L, p=0.008), received treatment at a later age (median age 0.06 years vs 0.04 years p=0.007), had a higher rate of noncompliance to treatment (68.18% vs zero, p<0.001) and were service patients (72.7% vs 20%, p=0.008).



CONCLUSION

This study showed the significant sociodemographic and clinical factors affecting the neurodevelopmental outcome of children diagnosed with CH.

RECOMMENDATION

Implementation of early treatment and good compliance to therapy will achieve a better neurodevelopmental outcome.

KEYWORDS: *Congenital Hypothyroidism, Vineland Adaptive Behavior Scales, Third Edition (Vineland-3), Neurodevelopmental Outcome*