ABSTRACT CITATION ID: NOAE064.613

AMONG PEDIATRIC NEURO-ONCOLOGY PATIENTS

BACKGROUND: The purpose of this study was to examine the prevalence, severity and time to develop Chemotherapy-induced hearing loss (HL) in a cohort of embryonal brain tumors (ET) treated with cisplatin and cranial radiation (RT). METHODS: Our cohort included children 3-15 years treated between January 2022 and June 2023 for medulloblastoma and other ETs with surgery, craniospinal RT and 6 cycles of CET chemotherapy (cyclophosphamide, vincristine, cisplatin). Cisplatin 75mg/m² was given in alternate cycles with a cumulative dose of 225mg/m². Children underwent clinical evaluation and age-appropriate audiological assessment at diagnosis, every 1-2 cycles of cisplatin and end-of-treatment. Grading of ototoxicity was done per SIOP-Boston grading. Children with grade 2 and above HL did not receive further cisplatin. Children with grade 1 HL underwent frequent monitoring. For this study, pure-tone audiometry from start of treatment to end of treatment were analyzed and ≥ Grade 2 HL was considered significant. RESULTS: A total of 63 children were included in the study; 28 (44.4%) female, median age 7 years (range 3-15 years). Twenty (31.7%) children developed ≥ grade 2 HL; the worse ear had grade 4 HL in 1 (1.6%), grade 3 in 13 (20.6%) and grade 2 in 6 (9.5%). One had grade 2 HL and 4 had grade 1 HL even prior to start of cisplatin. The median cumulative cisplatin dose at developing ≥ grade 2 HL was 0mg/m² (n=1), 75mg/m² (n=8), 150mg/m² (n=3) and 225mg/m² (n=9); 5 at end-of-treatment and 4 at follow-up). Age, gender and diagnosis were not associated with development of HL. CONCLUSION: The high prevalence of early-onset ototoxicity in children with embryonal brain tumours is concerning. We recommend close monitoring of hearing function, at least every 2 cycles of cisplatin chemotherapy, if not more frequently. Incorporation of pharmacogenomics to identify highly susceptible individuals and therapeutic interventions such as cessation of cisplatin or replacement with alternatives in early ototoxicity would help reduce a potentially life-altering and long-term health concern.

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QOL-27. EARLY CHEMOTHERAPY-INDUCED HEARING LOSS IN CHILDREN WITH MEDULLOBLASTOMA AND EMBRYONAL BRAIN TUMOURS

BACKGROUND: This abstract provides an initial scoping review of physical activity researches investigating the effects of physical activity on this group. However, the psychol...