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GCT-07. CONTRIBUTORS TO DELAYED TREATMENT OF NON-GERMINOMATOUS GERM CELL TUMORS IN CHINA: A TERTIARY-CENTER REVIEW

Anan Zhang1, Anthony P.Y. Liu2,4, Rong Zhang4, Bo Yang4, Yali Han6, Haiyan Chen1, Ibrahim Qaddoun1, Zeena Salman6, Godfrey C.F. Chan2,4, Yijin Gao1; 1Department of Hematology and Oncology, Shanghai Children’s Medical Center, Shanghai Jiaotong University School of Medicine, Shanghai, China; 2Department of Paediatrics and Adolescent Medicine, School of Clinical Medicine, The University of Hong Kong, Hong Kong, Hong Kong; 3Department of Paediatrics and Adolescent Medicine, Hong Kong Children’s Hospital, Hong Kong, Hong Kong, 4Department of Neurosurgery, HuaShan Hospital, Shanghai Medical College, FuDan University, Shanghai, China; 5Department of Neurosurgery, Shanghai Children’s Medical Center, Shanghai Jiaotong University School of Medicine, Shanghai, China; 6Department of Hematology and Oncology, Shanghai Children’s Medical Center, Shanghai Jiaotong University School of Medicine, Shanghai, China; 7Department of Radiation Oncology, Renji Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China; 8St Jude Hospital, Global Pediatric Medicine, Memphis, USA

BACKGROUND: Non-Germinomatous Germ Cell Tumors (NGGCT) are rare malignancies with potential for treatment delays. This study aims to identify risk factors and systemic challenges contributing to delayed management of NGGCT in China. METHODS: We reviewed the clinical features and referral pattern of 56 consecutively diagnosed NGGCT patients at Shanghai Children’s Medical Center (SCMC) from 9/2018-2/2023. Patients were diagnosed by pathology (n=42), or by elevated markers alone (n=4, AFP>10ng/ml, and/or β-HCG>50IU/ml). Patients were treated per COG ACNS0122. Delay of treatment was defined as chemotherapy initiated more than 6 months after symptom onset. RESULTS: Forty-three males and 13 females were included. Median age at diagnosis was 9.17 years (4-month-old) to 20 years. Primary tumor locations included the pineal region (n=31), sellar region (n=19), basal ganglia (n=5), and posterior fossa (n=1). Presenting symptoms included features of increased intracranial pressure (ICP; n=29), endocrine symptoms (n=21), blurred vision or squint (n=7), and hemiplegia (n=4). Delayed treatment occurred in 16 cases (29%), and was more likely in patients with non-pineal region primary (Chi-square p=0.003), and absence of symptoms pertaining to increased ICP (Chi-square p<0.001). Reasons for delay included lack of parental recognition on symptoms (n=7), misdiagnosis (n=3), and inappropriate/incomplete workup (n=6). As a national referral center, patients commuted a median of 48.3 km (range: 12-294.3km) to SCMC (median 2 hospitals (1.5) before SCMC), including 10 patients with obvious hydrocephalus travelling before any CSF diversion procedure. Three-year Event-Free Survival (EFS) was 76.9% and Overall Survival was 86.0%. There was a trend to inferior outcome in patients with delay in treatment (3y EFS 69.6% compared with those without (3year EFS 80.6%, p=0.112). CONCLUSIONS: Delay in treatment is common for children with NGGCT managed at a tertiary referral center in China. Improving public awareness, training for primary-care clinicians, and establishing a national referral network are potential strategies to enhancing the outcome.