Poster Session (Poster presentations categorized by each organ)

**P1 - 1 - 4** RISK ADAPTED-POSTOPERATIVE CHEMOTHERAPY AND OPTIMIZATION OF A DOSE OF CRANIAL IRRADIATION FOR CHILDHOOD MEDULLOBLASTOMA

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**Background:** Current studies for Medulloblastoma (MB)/ supratentorial primitive neuroectodermal tumors (sPNETs) which consist of maximal surgical resection, craniospinal radiation therapy (RT) at a dose of 24 Gy and chemotherapy (CT) have demonstrated an increasing survival rate. However, RT related morbidity of neurologic and psychological problems remains a major issue, especially in young children. We report here the preliminary result of multidisciplinary treatment in attempt to reduce the dose of craniospinal RT in our institution.

**Methods:** Between 2002 and 2013, 34 patients aged 0.5-14.11 years (median 4.1 years) with newly diagnosed MB/sPNETs were retrospectively analyzed. Criteria used to categorize patients as high risk (HR) included M1-4 disease by modified Chang staging classification, sPNETs, and infant (< 3 yrs). Postoperative CT was comprised of vincristine, etoposide, cisplatin, cyclophosphamide, and intrathical methotrexate. Children with standard-risk (SR) MB received 5 cycles of CT, followed by craniospinal RT (3-11 yrs: 18 Gy, ≤ 12 yrs: 24 Gy) with a posterior fossa (PF) boost, 32.4 Gy. Children with HR MB/sPNETs received 4-5 cycles of CT and a high-dose CT with stem cell rescue, followed by craniospinal RT with a PF boost (36 Gy). Infants also received 5 cycles of CT, followed by high-dose CT with stem cell rescue.

**Results:** The median follow-up period was 23 months. Twenty-six of 34 children were survived. Two-year progression-free survival were 64.8 ± 16.5% in SR group (N = 12), 90.9 ± 8.7% in HR group (N = 11), and 54.5 ± 15.0% in infants (N = 11), respectively. Two-year overall survival estimates were 77.7 ± 13.8% in SR, 90.9 ± 8.7% in HR, and 60.6 ± 15.7% in infants, respectively.

**Conclusions:** Our preliminary results showed that intensified systemic chemotherapy might contribute to reduction of craniospinal RT without reduction of survival rate. However, the validity of risk-stratification still remains as an issue to be solved.