QOL-32. PATIENTS TREATED FOR MALIGNANT BRAIN TUMOR IN THE FIRST THREE YEARS OF LIFE: CLINICAL SEQUELAE

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BACKGROUND: Pediatric Central Nervous System tumors are the most common solid tumors in children with a higher incidence rate in the first years of life. Patients treated for brain tumor are at high risk of sequelae. In the first years of life, brain immaturity increases the risk of developing these complications. OBJECTIVE: The goal of this study was to evaluate the medium and long term sequelae of malignant brain tumor treatment in patients diagnosed in the first three years of life and to correlate these sequelae with tumor histology, localization and treatment. PATIENTS AND METHODS: Forty - nine children with aggressive brain tumor diagnosed in the first three years of life followed in the Pediatric Hematology and Oncology Department of Padua between January 2000 and December 2020 were enrolled in this study. We evaluated features, such as age at onset, tumor localization, neurosurgical resection, histology, treatment and patient outocome. From May to September 2021 we clinically evaluated 16 of them who survived to treatment and we identified the presence of visual impairment, hearing loss, endocrine dysfunctions and neurological deficits in them. RESULTS: The most common sequelae in our patient population is motor impairment (30.8%), followed by endocrine dysfunction (23%), visual impairment (19.2%), epilepsy (11.6%), cranial nerve palsy (7.7%) and hearing loss (7.7%). In this study epilepsy is significantly associated with supratentorial tumors and endocrine dysfunction with high dose chemotherapy. CONCLUSIONS: Our data and recent literature confirm the high incidence of tumor and treatment sequelae in these patients. Therefore, since diagnosis, a multidisciplinary evaluation and management are necessary for improving patients' prognosis.

QOL-33. ADAPTIVE BEHAVIOUR OF PATIENTS TREATED FOR MALIGNANT BRAIN TUMOR IN THE FIRST THREE YEARS OF LIFE

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BACKGROUND: Adaptive behavior is defined as the effectiveness and degree to which an individual meets social/cultural standards of personal independence and social responsibility. Patients treated for brain tumor are at risk of alteration of adaptive behaviour that, with a reduced intellectual function, makes diagnosis of mental retard. OBJECTIVE: The aim of this study was to evaluate the adaptive behaviour of patients treated for malignant brain tumor in the first three years of life and the variables that may correlate with its alteration. PATIENTS AND METHODS: Twelve survivors of brain tumor diagnosed in the first three years of life followed in the Pediatric Hematology and Oncology Department of Padua between January 2000 and December 2020 were enrolled in this study. We defined the level of the adaptive behaviour by evaluation adaptive behavior questionnaire (ABAS II) completed by the parents. RESULTS: None of the patients shows a high level of adaptive behavior. Preliminary evidences suggest that, the level of adaptive behavior may be influenced by the sex, irradiation and time from the end of treatment. In details, females show a higher level of performance than males, patients not treated with radiotherapy performed better than patients irradiated and longer-term survivors have a better level of adaptive behaviour. CONCLUSIONS: This study confirms that patients treated for brain tumor show a lower level of adaptive behaviour than peers. The future objective is to assess adaptive behaviour at many times to recognize the problem early.

QOL-34. THE RELATIONSHIP BETWEEN PSYCHOLOGICAL FLEXIBILITY, QUALITY-OF-LIFE AND PSYCHOLOGICAL HEALTH IN YOUNG PEOPLE WHO HAVE EXPERIENCED A BRAIN TUMOUR

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Despite increasing survival rates in young people who have experienced a brain tumour, this patient group have the poorest reported quality-of-life (QoL) of all cancer survivors. QoL is defined as an individual's perception of their position in life in relation to their goals, expectations and standards. QoL can be influenced by physical functioning but one of its strongest predictors is psychological health. A concept that has a large impact on psychological health is Psychological Flexibility (PF). PF refers to the ability to recognise and adapt to situations, shift cognitive and behavioural repertoires which are impacting negatively on personal and social functioning and commit to behaviours that are in line with strongly held values. Studies have demonstrated a relationship between PF and QoL in other patient populations such as chronic pain and breast cancer survivors. In this study we explored the relationship between PF and QoL at baseline in a sample of young people enrolled in a randomised controlled trial of Acceptance and Commitment Therapy (ACT) for young people who have experienced a brain tumour. We found that higher PF was associated with higher QoL in both 11-15 year olds ($R2 = .69$, $p < .05$) and 16 – 24 year olds ($R2 = .29$, $p < .01$). We also found higher PF was associated with lower levels of mental health difficulties ($R2s \geq .24$, $ps < .01$) which was also associated with higher levels of QoL ($R2 = .49$, $p < .01$). The results suggest assessing and providing support to increase PF is important for young people who have experienced a brain tumour. It highlights that interventions found to increase PF, such as ACT, could be helpful in improving psychological health in this population.

QOL-35. SCHOOL REENTRY OF CHILDREN AND ADOLESCENTS WITH A BRAIN TUMOR: CAN WE IMPROVE FAMILY-SCHOOL-HOSPITAL COOPERATION? AN ANALYSIS OF SUPPORTIVE AND INHIBITING FACTORS AS A RESULT OF A PILOT PROJECT

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OBJECTIVE: School reentry support focusing on providing information to schools and communication between patient/family-hospital-school is defined as a psychosocial standard of care in pediatric oncology (Thompson et al., 2015). This is critical for students with brain tumors (BT) - although it is not yet universally implemented - especially during follow-up, as they are a risk group for late effects. Due to long distances between family-hospital-school, limited personnel capacities and since 2020 Covid-19 restrictions, an online-event (OE) for teachers from external schools was designed, with the aim of: (1) strengthening cooperation, (2) breaking down barriers and (3) increasing level of knowledge. METHODS: 54 teachers participated in each of two OEs. Content was presented by an interdisciplinary team (clinician, clinical/neuropsychologist, social worker, teacher), followed by time for sharing experience. Two months after event 2, participants were asked to complete an evaluation in an anonymous online survey. Supportive and inhibiting factors for successful school reintegration were included in the survey and statistically analyzed. RESULTS: 54% of 23 respondents (70% teaching > 10 years) felt that their training before the event did not prepare them adequately for a teaching setting with seriously ill children (1-3 points on a 10-point Likert-scale). 92% rated their knowledge greater after the event. All interdisciplinary inputs were rated very useful and practical (79-88%: 8-10 points). 38% felt relieved to got to know contact persons. 33% rated teaching a student with BT as fundamentally challenging and felt more confident after the event. CONCLUSION: The results of this pilot project indicate that an online-information-event can increase knowledge and cooperation. Resulting promoting and inhibiting factors for school reintegration will be incorporated into future concept improvement. The findings further highlight the great importance of ongoing support in the form of a reintegration teacher and interdisciplinary input for schools to appropriately support students with BT.

NEUROSURGERY

SURG-01. THE TENTATIVE APPLICATION OF EN BLOC CONCEPT IN THE PEDIATRIC BRAIN TUMOR: A RETROSPECTIVE STUDY OF 171 CASES FROM A LARGE PEDIATRIC CENTER IN CHINA

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BACKGROUND: The less allowable blood loss and tolerance of intraoperative blood loss of children lead to the high rate of massive blood transfusion. The surgical concepts of en bloc resection may contribute to the improvement of brain tumor resection. OBJECTIVE: To investigate the effects of en bloc concept on short outcomes of pediatric brain tumors and factors associated with the application of en bloc concept. METHODS: Ac-