Abstracts

KS02.5.A. COVID19 IMPACT ON THE NEURO-ONCOLOGICAL POPULATION. EVALUATION OF CRITICAL ISSUES AND RESOURCES NEEDS IN PATIENTS AND CAREGIVERS

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BACKGROUND: The COVID-19 pandemic has infected on patients (PTS) with cancer regarding disease evolution as well as the emotional and social functioning. The assessment of the needs and perceptions of PTS and their caregivers, is a priority to ensure an adequate standard in taking care and to promote the compliance to the treatments.

The aim of this study is to understand how COVID-19 affects the emotional state and medical relationship in neuro-oncology. MATERIAL AND METHODS: A prospective study was conducted on neuro-oncological PTS and their caregivers, including a 41-questions and 16-question survey respectively. RESULTS: 162 PTS and 66 caregivers completed the questionnaire. 57.3% of PTS perceived grater risk, same the same risk and 5% lower risk contracting the COVID-19 disease compared to the general population. 9.6% of PTS got SARS-CoV2 infection. Using a scale 0-10 for the assessment of anxiety, PTS experienced 5.8 (standard deviation, sd 2.6) as anxiety level related to tumor and 4.6 (sd 2.5) level about COVID-19 risk. For the most part there was no change in the treatment of cancer (81.5%). Due to the COVID-19 pandemic, 9.2% of PTS decided to delay anti-tumoral therapeutic schedule and 27.9% referred to be worried about going to hospital for consultation. Overall, 93.5% of PTS was satisfied with the treatments received. 52.6% of PTS felt different perception of the future during COVID-19, mostly referred like more uncertain. Caregivers experienced 7.7 (sd 2.1) anxiety level about tumor and 5.5 (sd 2.4) about COVID-19 risk. In 67.7% of caregivers the perception of the future has been changed, mostly towards greater insecurity. 75.0% of PTS described at least good Quality of Life (QoL), 65.4% of PTS declared to have sufficient resources to deal with the situation. There was a correlation between QoL and resources (p = 0.000), 77.3% of caregivers defined their care burden increased during the pandemic and 74.6% defined their QoL at least as good. We found a correlation between COVID-19 anxiety and anxiety for tumor diagnosis (p=0.53%, p = 0.000) as well as with future perception (Mann Whitney U test between PTS with different versus unchanged future perception, p = 0.001). In the PTS population, CONCLUSION: The WHO definition of health refers to the biopsychosocial model. This model attributes the outcome of disease, as well as health, to the intricate and variable interaction of biological, psychological factors and social factors. In line with this model, it is essential to guarantee and improve the standard of care also based to the real needs perceived by PTS and caregivers and to historical and social context. This is especially important in a pandemic period like COVID-19 in which the good QoL can be compromised. An appropriate health-system organization and a special attention to patient doctor communicacion can make the different on QoL and the future perception.

KS02.5.B. COVID19 IMPACT ON THE NEURO-ONCOLOGICAL POPULATION. EVALUATION OF CRITICAL ISSUES AND RESOURCES NEEDS IN PATIENTS AND CAREGIVERS

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KS02.5.C. COVID19 IMPACT ON THE NEURO-ONCOLOGICAL POPULATION. EVALUATION OF CRITICAL ISSUES AND RESOURCES NEEDS IN PATIENTS AND CAREGIVERS

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The incidence rates were evaluated by calculating the estimated annual per local completeness of the NCR/DBTR. Time trends of the age-adjusted base maintained by one of the Dutch neuro-oncology centres to evaluate Brain Tumour Registry (DBTR) for meningiomas as of 2016. In addition the Netherlands Cancer Registry (NCR), which was expanded to the Dutch patients diagnosed with meningioma during 2000-2019 were obtained from the School for Oncology and Reproduction, Maastricht, Netherlands.

BACKGROUND: Meningioma mostly occurs at the primary resection hospital. Malignancies and their surgical treatment. This study aims to develop a highly specific and sensitive optical probe for intraoperative meningioma imaging to guide the tumor resection. Fluorescent dyes in the near infrared (NIR I, 700-1000 nm) are well suited for in vivo imaging with suitable cameras up to few millimeters in depth in real time. Our objective is to invent a fluorescent NIR I and II probe specifically targeting the somatostatin receptor type 2 (SSTR2) reliably overexpressed in meningiomas independent of WHO grade and subtype. MATERIAL AND METHODS: By designing a receptor agonist, a somatostatin analog (Rogate STATY, Tyr(3)Thr(8)-Octreotid) to a new developed dye (nNIR), we synthesized a SSTR2 specific probe. Its optical properties are comparable to indocyanine green and stability as well as bleaching kinetic were observed in vitro. The probe was intravenously injected in native mice to evaluate pharmacokinetics and biodistribution and detected by a custom-built camera setup focusing on physiologically highly expressing SSTR2 tissues validated by immunohistochemistry (IHC). As proof-of-principle fluorescence guided tumor resection was performed in an eptopic and orthotopic meningioma IOMM-Lee mouse model. RESULTS: The SSTR2-nNIR probe is stable in aqueous solution up to 12h with favorable optical properties regarding kinetics, biodistribution and photosafety compared to its IRDye800 analogue. In vivo, we observed a highly specific physiological signal uptake in the gastric epithelium, the pancreas and pituitary (they are highly expressing SSTR2). By linking a somatostatin analog (TATE, Tyr(3)Thr(8)-Octreotid) to a new developed dye (nNIR), we synthesized a SSTR2 specific probe. Its optical properties are comparable to indocyanine green and stability as well as bleaching kinetic were observed in vitro. The probe was intravenously injected in native mice to evaluate pharmacokinetics and biodistribution and detected by a custom-built camera setup focusing on physiologically highly expressing SSTR2 tissues validated by immunohistochemistry (IHC). As proof-of-principle fluorescence guided tumor resection was performed in an eptopic and orthotopic meningioma IOMM-Lee mouse model. RESULTS: The SSTR2-nNIR probe is stable in aqueous solution up to 12h with favorable optical properties regarding kinetics, biodistribution and photosafety compared to its IRDye800 analogue. In vivo, we observed a highly specific physiological signal uptake in the gastric epithelium, the pancreas and pituitary (they are highly expressing SSTR2).