performed an extensive review of chimeric OVs and specific modifications engineered to optimize safety and efficacy. Additionally, we assessed potential to use these principals to engineer the SARS-CoV-2 glycoprotein spike onto a non-pathogenic, replication competent virus to yield a novel chimeric for noninvasive, intranasal delivery. RESULTS: Viruses with pathogenic properties in wild-type have been successfully used as components of OVs and have demonstrated potential in both preclinical and clinical trials. Outcomes show that despite wild-type virulence, notable toxicities were not observed in clinical trials, highlighting the potential of viral pseudotyping as a safe therapeutic approach. CONCLUSIONS: The proposed method to utilize the SARS-CoV-2 glycoprotein in a novel chimeric poses advantages including 1) potential for non-invasive delivery, 2) therapy without need for maximal or uniform tumor coverage due to replication competence, 3) ability to reach infiltrative glioma cells, 4) potential to reach the brainstem, and 5) stimulation of host immunity through tumor cell lysis and antigen presentation

COVD-19. COGNITION, CANCER, AND COVID: DELIVERING DIRECT-TO-HOME TELE-NEUROPSYCHOLOGY SERVICES TO NEURO-ONCOLOGY PATIENTS

Melissa Gardner[1], Farah Aslanzadeh[2], Giuliana Zarrella[3], Sarah Braun[2], Ashlee Loughan[2], and Michael Parsons[3]; [1]William James College, Boston, MA, USA, [2]Virginia Commonwealth University, Richmond, VA, USA, [3]Massachusetts General Hospital, Boston, MA, USA

BACKGROUND: The COVID-19 pandemic altered the delivery of healthcare services globally with a rapid adoption of telemedicine to meet patient's needs. Telemedicine is critical for neuro-oncology patients who may be at an increased risk of infection, yet require continuity of care. An important aspect of neuro-oncology care includes neuropsychological assessment, which can be challenging to complete outside of a structured testing environment. Teleneuropsychology (TNP) has been explored under proctored conditions and proven feasible and reliable. Conducting TNP visits directly to the patients' home (DTH-TNP) had minimal study prior to the pandemic, but was implemented to reduce COVID-19 exposure. METHODS: We used surveys to examine patient acceptance and clinician feasibility of DTH-TNP at two regionally diverse medical institutions routinely providing neuropsychological assessments services to neuro-oncology patients from April to August 2020, Massachusetts General Hospital (MGH) and Virginia Commonwealth University (VCU). RESULTS: 45 patients voluntarily responded (MGH=30, VCU=15) and 98 percent (MGH=100%, VCU=93%) of respondents were satisfied with the DTH-TNP experience. Nine percent (MGH=7%, VCU=13%) reported challenges (e.g., technological issues) during the appointment. Eighty-nine percent (MGH=90%, VCU=87%) would recommend the virtual visit to others. Patients perceived reduced risk of infection (MGH=77%, VCU=87%) and time traveling to clinic (MGH=87%, VCU=80%) as favorable aspects of DTH-TNP. 43 clinician surveys collected at MGH indicated that clinicians were able to achieve the goal of their appointment in 91% of clinical encounters. Common issues reported by clinicians included trouble connecting (7%) to the telemedicine platform and environmental disruptions (12%). DISCUSSION: This preliminary data suggests neuro-oncology patients and clinicians find DTH-TNP to be an acceptable and feasible practice, while also recognizing its limitations. This study is limited in that voluntary patient surveys are subject to bias. These results suggest that further study of DTH-TNP (e.g., reliability, validity, and limitations) for neuro-oncology patients is warranted. Future directions are discussed.

COVD-20. COVID-19 INFECTION DURING CHEMOTHERAPY FOR MALIGNANT GLIOMA: OUTCOMES AMONG 3 PATIENTS

Esther Kim, Amily Koshy, Shannon Higgins, Andrew Lassman, and Fabio Iwamoto; Columbia University Irving Medical Center/New York-Presbyterian Hospital, New York, NY, USA

BACKGROUND: Chemotherapy may increase risk of SARS-COV-2 infection and COVID-19 severity. METHODS: A patient developed COVID-19 during chemotherapy for glioma. We retrospectively identified others diagnosed with COVID-19 during temozolomide or lomustine for glioma. RESULTS: (1) A 64 year-old woman (index patient) with anaplastic oligodendroglioma received PCV 22 months previously. Baseline White Blood Cell (WBC) count was 4.2 and Absolute Neutrophil Count (ANC) was 2.7 K/uL. KPS was 90 without comorbidities. For recurrence she initiated temozolomide but developed fever on cycle 1 day 2. SARS-COV-2 PCR was positive. Further temozolomide was held. She is recovering as an outpatient. (2) A 27 year-old man with anaplastic astrocytoma received concurrent RT/temozolomide then 1 cycle of adjuvant temozolomide. Baseline WBC was 8.3, ANC 5.2, and KPS 90. Obesity, asthma, and pre-diabetes were comorbidities. Hyposmia/hypogeusia and low-grade fever began, in retrospect, during concurrent RT/temozolomide. PCR for SARS-COV-2 was negative 2 months after symptom onset; serology detected both IgG and IgM when WBC was 6.6 and ANC 4.0. Cycle 2 of adjuvant temozolomide was held until fever resolved (spontaneously); hyposmia/hypogeusia persist. (3) A 53 year-old man with glioblastoma previously received RT/temozolomide, then lomustine and bevacizumab for progression. WBC was 5.1, ANC 4.0, and KPS 60. He was obese. Fever, chills, and dyspnea developed on lomustine cycle 2 day 38. SARS-COV-2 PCR was positive. He was hospitalized and chemotherapy held; symptoms resolved 12 days after onset, but PCR continued to show detectable virus 32 days later. PCR became negative after 50 days total, and treatment resumed uneventfully. DISCUSSION: All 3 patients recovered from SARS-COV-2 infection despite active temozolomide or lomustine chemotherapy. Normal ANC, high KPS, and early detection may have contributed to limited symptom severity and duration, despite obesity and other comorbidities in 2 cases. Detection changed management by delaying additional cycles of immunosuppressive chemotherapy until recovery.

COVD-22. COVID-19+ GLIOMA PATIENT CARE: LESSONS FROM A 5-PATIENT CASE SERIES

Ahmad Daher; Hartford HealthCare Medical Group, West Hartford, CT, USA

Glioma patients, like other cancer patients, are at an increased risk of COVID-19 infections, but there are no specific guidelines on how their care should be modified during this pandemic. The challenge to develop such guidelines is largely related to the limited number of reported cases and lack of studies on this particular patient population. We present a 5-patient case series of glioma, detailing their baseline characteristics, treatment courses, lab abnormalities, and the changes made to their care after they developed COVID-19. The median age of the patient population was 66 years. All patients had IDH-wild type glioma (3 Grade IV, 1 Grade III, and 1 Grade II) and all of whom had received temozolomide chemotherapy shortly before COVID-19 diagnosis (median = 22 days). Three patients presented with mild non-respiratory symptoms requiring hospitalization to two of them, and adjuvant Temozolomide chemotherapy was held in all. One patient developed severe symptoms of shortness of breath requiring ICU-stay and expired eight days later. One patient was asymptomatic, tested positive during a routine pre-chemotherapy screening, and initiation of temozolomide was delayed by two weeks after a negative repeat test. All four symptomatic patients were rehabilitation facility residents. The most common lab abnormality was lymphopenia seen in 4/5 patients. Other abnormalities seen included elevated ferretin/total bilirubin/CRP/LDH/procalcitonin/D-dimer, thrombocytopenia/leukopenia, and low sodium/vitamin D. Chest x-ray findings were normal in 3/5 patients and showed ground glass opacities in 1 patient. COVID-19 screening during different phases of glioma therapy is recommended. Therapy interruptions or shortening duration of treatment particularly of temozolomide given its risk on lymphopenia may be needed. lymphopenia thresholds, MGMT promoter methylation status, and residence in rehabilitation facilities may help stratify glioma patient COVID-19 risks further. Patients and their family will need to be involved in therapies' risk:benefit discussions during this pandemic.

COVD-23. PLANNED-USE GLUCARPIDASE FOR OUTPATIENT HIGH DOSE METHOTREXATE (HD-MTX) ADMINISTRATION IN PATIENTS WITH CNS LYMPHOMA (CNSL) DURING THE COVID-19 PANDEMIC

Lauren Schaff[1], Mina Lobbous[2], Alexis Bozza[1], Dean Carlow[2], Louis Nabors[2], and Christian Grommes[1]; [1]Memorial Sloan Kettering Cancer Center, New York, NY, USA, [2]University of Alabama at Birmingham, Birmingham, AL, USA

Infection with SARS CoV-2 virus has resulted in a global pandemic of COVID-19, a respiratory illness with a crude mortality rate of 3–4%. Risk of death is higher in the elderly and in patients with underlying comorbid conditions. When local incidence of COVID-19 is high, hospital resources are scarce and elective admissions and procedures are placed on hold. Patients with CNSL receiving first-line HD-MTX require admission for monitoring and aggressive hydration to prevent toxicity. This study explores the feasibility of planned-use glucarpidase, a recombinant bacterial enzyme that rapidly reduces serum MTX levels, to facilitate outpatient administration of HD-MTX. Eligible adult patients had isolated CNSL and had previously tolerated inpatient HD-MTX. MTX 3.5 g/m^2 was administered in the outpatient setting with hydration. Patients returned 24 hours after MTX administration for glucarpidase 2000u and additional hydration. MTX level was determined by high pressure liquid chromatography (HPLC) 48 hours following MTX administration. To date, seven outpatient HD-MTX treatments have been administered to a total of three patients. In all cases, MTX levels were reduced to < 100 nmol/L at 48 hours. Three treatments resulted in grade 1 elevation of AST/ALT (two patients). One treatment resulted in a grade 2 creatinine increase. Creatinine returned to baseline following additional outpatient hydration. No patients required hospital admission. This study demonstrates feasibility of outpatient HD-MTX administration with planned-use glucarpidase during the COVID-19 pandemic. We are currently