Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
117787

Impact of COVID-19 related lockdown measures on stroke care quality in Careggi University Hospital, Florence

Alessandro Sodero, Cristina Sarti, Donatella Accavone, Silvia Biagini, Ylena Failli, Veronica Iovene, Costanza Rapillo, Giulia Scrima, Francesco Arba, Mariella Lamassa, Mascia Nesib, Vanessa Palumbo, Francesca Pescini, Benedetta Piccardi, Anna Poggesi, Patrizia Nencini, Scrimaa, Francesco Arbab, Mariella Lamassa, Mascia Nesib, Vanessa Biaginia, Ylenia Faillia, Veronica Iovene, Costanza Rapillo, Giulia receiving EVT raised (from 23% to 31%, stroke patients and 22%vs20% receiving rtPA), while the proportion Hospital and those receiving tPA showed a mild decline (114vs94 2020) and pre-pandemic (the same period of 2019), to evaluate the impact of COVID-19 related restrictions on performance metrics and overall stroke care efficiency at our center.

Methods

This was a single-centre, observational cohort study performed in Careggi University Hospital, a Tertiary Stroke Center with endovascular facilities of the integrated “Hub and Spoke” stroke organisation in Area Vasta Centro of Tuscany. We retrospectively analysed system processes timings, treatment and clinical variables between early pandemic phase (from 1st of March to 30th of April 2020) and pre-pandemic (the same period of 2019), to evaluate the impact of COVID-19 related restrictions on performance metrics and overall stroke care efficiency at our center.

Results

In 2020 the number of acute stroke patients admitted to our Hospital and those receiving tPA showed a mild decline (114vs94 stroke patients and 22%vs20% receiving rtPA), while the proportion receiving EVT raised (from 23% to 31%, p = 0.190). A slight delay in patients’ shipment and treatment administration was generally detected in 2020 (an increase of 45 min p = 0.484 in symptom onset to 1st_Hospital_door_time, 19 min p = 0.192 in door_to_needle and 18 min p = 0.220 in door_to_groin_puncture), but some intrahospital parameters improved regarding during pandemic: mean door to neurological evaluation and to CT Scan timings were significantly lower in 2020 (12minvs0 min, p = 0.005 and 93vs58, p = 0.01, respectively).

Conclusions

Overall quality of care performance at our comprehensive stroke center was not affected during lockdown period.

doi:10.1016/j.jns.2021.117787

117788

Clinical, neurophysiological and neuroradiological characteristics of 30 cases of SARS-COV-2-associated encephalitis in Lombardia

Filippo Martinelli Boneschi, Maria Sessa, Donata Guidetti, Giampiero Grampa, Eugenio Magni, Maurizio Versino, Carlo Ferraresi, Davide Zarcone, Alessandro Prelle, Giuseppe Micieli, Carla Zanferrari, Fabio Frediani, Antonio Cagnani, Angelo Zilio, Maria Calloni, Emilio Mariani, Camillo Foresti, Massimo Crabbio, Isidoro La Spinia, Vera Paccouo Dal Maschio, Andrea Giorgetti, Anna Cavallini, Michela Ranieri, Elisabetta D’Adda, Andrea Salmaggi, Antonio Colombo, Fondazione IRCCS Ca’ Granda Ospedale Maggiore Policlínico, Neurology Unit & MS Centre, Dino Ferrari Centre, Neuroscience Section, Department of Pathophysiology and Transplantation, University of Milan, Milan, Italy, ASST Papa Giovanni XXIII, Department of Neurology, Bergamo, Italy, Ospedale Guglielmo da Saliceto, U.o. Neurologia, Piacenza, Italy, Ospedale Sant’Anna, U.o. Neurologia, Como, Italy, Fondazione Poliambulanza Istituto Ospedaliero, U.o. Neurologia, Brescia, Italy, Università dell’ Insubria, U. o. Neurologia, Ospedale Di Varese, Varese, Italy, University of Milan-Bicocca, Neurology, Ospedale San Gerardo, Monza, Italy, Ospedale Sant’Antonio Abate, U.o. Neurologia, Gallarate, Italy, Ospedale di Legnano, U.o. Neurologia, Legnano, Italy, Fondazione Mondino, U.o. Neurologia, Pavia, Italy, Ospedale di Vizzolo Predabissi, U.o. Neurologia, Vizzolo Predabissi, Italy, ASST Santi Paolo Carlo, Headache Center, Milan, Italy, Ospedale Maggiore, U.o. Neurologia, Crema, Italy, Ospedale Maggiore, U.o. Neurologia, Lodi, Italy, Ospedale di Legnano, U.o. Di Neurologia-stroke Unit, Legnano, Italy, Fondazione IRCCS Ca’ Granda Ospedale Maggiore Policlínico, Neurology Unit, Milan, Italy, Manzoni Hospital, Neurology Unit, Lecco, Italy, Polo Neurologico Brunateo, Uoc Neurologia E Stroke Unit Ospedale Di Desio, Seregno, Italy

Background and aims

The number of cases of encephalitis in COVID-19 pandemic is increasing. We describe characteristics and outcome of encephalitis in COVID-19 (COV-ENC) patients in one of the most affected regions by COVID-19 of the world, Lombardia, during the first pandemic wave.

Methods

A multi-center observational study on neurological complications in COVID-19 patients was conducted by the Italian society of Hospital Neuroscience (SNO). Adult patients admitted to 20 Neurological Departments in Lombardia between February-April 2020 with COV-ENC have been included.

Results

30 COV-ENC patients had a mean age of 66.5 years and male frequency of 56.6%. Altered consciousness was characterized by
confusion in 86%, coma in 30%, delirium in 37.9% and alteration of personality traits in 27.6%. Epileptic seizures occurred in 74% of cases. One third of cases had hyperproteinorrachia, one third pleocytosis/ hyperproteinorrachia, and remaining third had a normal CSF. PCR for SARS-CoV-2 was negative in all tested patients. EEG was altered in 82.7% of patients. Brain CT and MRI were normal in 9 patients, and among abnormal findings 9 patients had mesial temporal lesions, one of which confirmed with PET imaging. The course was favorable in 39.2% of patients, sequelae were few in 26.6% and moderate in 19.2%, while 20% of patients died.

Conclusions
The outcome tends to be worse in male patients. PCR negativity seems to confirm an autoimmune etiology more than a direct invasion of the virus. However, a temporal lobe involvement, detected in 30% of patients with COV-ENC, suggests usual sites of encephalitis due to herpes virus.

doi:10.1016/j.jns.2021.117788

117789
Metabolic signature of hyposmia after mild COVID-19: An [18F-FDG-pet study

Matteo Pardini[ab], Isabella Donegani[bc], Alberto Miceli[de], Matteo Bauckneht[ef], Silvia Chiola[gh], Michele Pennone[hi], Cecilia Marini[jk], Federico Massa[il], Stefano Raffa[jl], Dario Arnaldi[ml], Giannmarino Sambuceti[bn], Flavio Nobili[bo], Silvia Morbelli[bp], aIRCS, Ospedale Policlinico San Martino, Department of Neurology, Genova, Italy, bUniversity of Genoa, Department of Neuroscience, Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health (dinogmi), Genoa, Italy, cUniversity of Genoa and IRCCS Ospedale Policlinico San Martino, Department of Health Science (dissal), Genoa, Italy, dHumanitas Clinical and Research Center, Unit of Nuclear Medicine, Rozzano, Italy

Background and aims
Persistent hyposmia represents one of the most common neurological complications of coronavirus disease 2019 (COVID-19) due to SARS-CoV-2 infection. To date, however, its neural bases remain poorly understood.

Methods
Sixty-two patients (mean age 64 ± 10.5 years, range 35–79) underwent whole-body [18F-FDG-PET including a dedicated brain acquisition following their recovery after SARS-CoV2 infection. Patients that previously required mechanic ventilation or showed severe respiratory distress syndrome due to SARS-CoV-2 infection were excluded given the potential independent effect of these clinical scenarios on brain metabolism. The presence of isolated persistent hyposmia was assessed with the smell diskettes olfaction test. Voxelwise analyses were used to compare hyposmic and non-hyposmic patients and controls (61 subjects, age 61.1 ± 11.1 years), as well as to correlate regional metabolism with quantitative performance at the olfaction test.

Results
Relative hypometabolism was demonstrated in bilateral parahippocampal and fusiform gyri and in left insula in hyposmic patients with respect to controls and in the orbitofrontal cortex in hyposmic patients compared to non-hyposmic patients. In the hyposmic group, quantitative performance at the olfaction test correlated with regional metabolism in the cingulate gyrus, in the bilateral thalami and in the right temporal gyrus.

Conclusions
Isolated persistent hyposmia hyposmia after SARS-CoV2 infection without an history of severe respiratory distress is associated with significant metabolic alterations in regions beyond those involved in primary olfactory processing.

doi:10.1016/j.jns.2021.117789

117790
Effectiveness and safety of ocrelizumab in a real-world setting: A single center experience from southern italy

Tommaso Guerra, Francesca Caputo, Luca Bollo, Pietro Iaffaldano, Damiano Paolicelli, Maria Trojano, University of Bari Aldo Moro, Department of Basic Medical Sciences, Neurosciences and Sense Organs, Bari, Italy

Background and Aims
Ocrelizumab (OCZ) has been approved in 2018 in Italy for the treatment of patients with multiple sclerosis (MS), but real-world data about its use are limited. Aims: To evaluate effectiveness and safety of OCZ for primary progressive MS (PPMS), active secondary progressive (SPMS) and relapsing remitting MS (RRMS) patients recruited at the MS Center of Bari, Italy.

Methods
Patients with ≥3 infusions were retrospectively recruited. Clinical and demographic data were collected (Table 1). Wilcoxon paired test was used to evaluate the EDSS changes over time. We assessed relapse incidence after treatment start and adverse events (AE).

| VARIABLE | NR | RP |
|----------|----|----|
| Female vs. ≤50 | 60 (65%) | 56 (58%) |
| Age at first DMT start, mean (SD) years | 59.3 (13.97) | 61.6 (14.86) |
| EDSS before first DMT start, mean (SD) | 6.01 (1.95) | 5.66 (1.75) |
| Low EDSS-reduction: First DMT start, mean (SD) | 4.01 (2.89) | 4.56 (1.83) |
| Disease duration at Ocrelizumab start, mean (SD) years | 12.68 (12.2) | 12.38 (11.9) |
| Treatment duration, mean (SD) years | 0.00 (0.00) | 0.00 (0.00) |

Results
Our cohort of 133 patients included 35 PPMS, 22 SPMS and 76 RRMS patients. The median (IQR) follow-up after the first DMT start were 2.09 (0.6–3.3), 1.8 (0.08–4.02), 1.63 (1.17–3.10) years for PPMS, RRMS and SPMS patients respectively. The last available EDSS after OCZ start significantly increased compared to the baseline values only in the PPMS group (p = 0.01), but it remained stable in SP and RR groups. No clinical relapses and no evidence of radiological activity were found in RRMS patients during follow up. AEs reported were mostly infusion-related reactions in all groups, 1 Dengue fever and 2 Herpes Zoster infections. Seven of our cases reported COVID-19 infection during pandemic, one of them died.

Conclusions
Our real-world data indicate that OCZ stabilized disability progression and disease activity in RR and SP patients. The safety profile was quite favorable in this cohort.

doi:10.1016/j.jns.2021.117790