

Library Current Awareness Bulletin

Stroke – October 2020

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News

[NHS 'lifeline' for hundreds of stroke survivors](#)

NHS England

August 2020

[Stroke Connect, a partnership with the NHS and the Stroke Association provides stroke survivors with support and advice in the early days following hospital discharge, without having to leave the house.]

[Shared Learning Awards 2020 finalist – East of England stroke telemedicine partnership](#)

NICE

October 2020

[A partnership between local hospitals in the East of England was created to provide swift access to out of hours stroke expertise. Details are provided on what was done and why, the outcomes and impact, and what was learnt.]

[Shared Learning Awards 2020 highly commended example – supporting carers of people discharged from hospital following a stroke](#)

NICE

October 2020

[The initiative was inspired by research at the University of Southampton on the rehabilitation burden experienced by carers of people who are discharged from hospital relatively quickly after a mild or moderate stroke.]

COVID-19: Impact on Research

[Neuroendovascular clinical trials disruptions due to COVID-19. Potential future challenges and opportunities](#)

Rai, A. et al

Journal of Neurointerventional Surgery, vol. 12(9) pp. 831-835

September 2020

[This study aimed to assess the impact of COVID-19 on neurovascular research and deal with the challenges imposed by the pandemic. A survey-based study focused on randomized controlled trials (RCTs) and single-arm studies for acute ischemic stroke and cerebral aneurysms was developed by a group of senior neurointerventionalists and sent to 101 institutions, identified through the clinical trials website (<https://clinicaltrials.gov/>), study sponsors, and physician investigators. The response rate was 64%.]

COVID-19: Infection Prevention

[Nosocomial spread of COVID-19: lessons learned from an audit on a stroke/neurology ward in a UK district general hospital](#)

Jewkes, S.V. et al

Clinical Medicine, vol. 20(5)

September 2020

[The authors describe the details of a COVID-19 outbreak in a 25-bedded Birmingham neurology/stroke ward in the early phase of the pandemic (March to May 2020). 21 of 133 admissions (16%) tested positive for COVID-19 and of those, eight (6% of all admissions to the ward) were determined to be nosocomial. Thus 38% (8/21) of COVID-19 infections were hospital-acquired. Ten of the patients that contracted COVID-19 died; of these three were hospital-acquired cases. Five of the 21 patients had negative swabs prior to receiving a positive test result. This study highlights the importance of appropriate use of personal protective equipment (PPE) with high-risk patients (including those with stroke and complex brain injury with tracheostomies) and the difficulties of COVID-19 management in a high-risk patient population.]

[Streamlined poststroke treatment order sets during the SARS-CoV-2 pandemic: Simplifying while not compromising care](#)

Gioia, L.C. et al

Stroke, vol. 51(10) pp. 3115-3118

October 2020

[A streamlined post-stroke treatment protocol was developed at a stroke centre in Montreal to limit frequency of patient encounters while maximising the yield of each encounter by grouping together different components of post-stroke care into single bedside visits.]

COVID-19: Stroke Patients

[Characteristics and outcomes in patients with COVID-19 and acute ischemic stroke: The global COVID-19 stroke registry.](#)

Ntaios, G. et al

Stroke, vol. 51(9)

September 2020

[All consecutive patients hospitalised with laboratory-confirmed COVID-19 and acute ischemic stroke in 28 sites from 16 countries were pooled. To assess whether stroke severity and outcomes in patients with acute ischemic stroke are different between patients with COVID-19 and non-COVID-19, 1:1 propensity score matching analyses were performed of the COVID-19 patients with non-COVID-19 patients registered in the Acute Stroke Registry and Analysis of Lausanne Registry between 2003 and 2019.]

[COVID-19 and ischemic stroke: a systematic review and meta-summary of the literature](#)

Tan, Y-K. et al

Journal of Thrombosis and Thrombolysis, vol. 50(3) pp. 587-595

October 2020

[We performed a systematic review to characterise the clinical characteristics, neuroimaging findings, and outcomes of acute ischaemic stroke in COVID-19 patients. A literature search was performed in PubMed and Embase using a suitable keyword search strategy from 1st December 2019 to 29th May 2020. All studies reporting acute ischaemic stroke occurrence in COVID-19 patients were included. A total of 39 studies comprising 135 patients were studied.]

[COVID-19 screening with chest CT in acute stroke imaging: A clinical decision model](#)

Qureshi, A.I. et al

Journal of Neuroimaging, vol. 30(5) pp. 617-624

September 2020

[This study aimed to determine the value of incorporating a chest computed tomography (CT) scan during acute stroke imaging, and the factors that influence this decision. A probabilistic decision tree of the value of acquiring a chest CT scan or not was constructed and expressed in quality-adjusted life months (QALM) of patients and medical professionals. The model was based on the chance of detecting infection by chest CT scan, the case fatality rates of COVID-19 infection, the risk of COVID-19 infection after exposure, the expected proportion of medical professionals exposed, and the exposure reduction derived from early disease detection.]

[Cross-talk between key players in patients with COVID-19 and ischemic stroke: A review on neurobiological insight of the pandemic](#)

Kaushik, P. et al

Molecular Neurobiology, vol. 57(12)

December 2020

["The COVID-19 pandemic has affected people with various pre-existing diseases, including IS, in such a way that these patients need special care and attention for their survival. Several clinical trials are currently ongoing worldwide as well as many other projects are in different stages of conceptualization and planning to facilitate the effective management of stroke patients with COVID-19 infection."]

[Impact of COVID-19 on neurological manifestations: an overview of stroke presentation in pandemic](#)

Fatima, N. et al

Neurological Sciences, vol. 41(10) pp. 2675-2679

October 2020

[The authors sought to determine the etiology, underlying risk factors, and outcomes among patients with COVID-19 presenting with stroke. They conducted a systematic review, searching PubMed, Google Scholar, Scopus, Medline, EMBASE, and Cochrane library, using MeSH terms from November 2019 to June 2020. A total of 39 patients with stroke from 6 studies were included.]

[Incidence and consequences of systemic arterial thrombotic events in COVID-19 patients](#)

Cantador, E. et al

Journal of Thrombosis and Thrombolysis, vol. 50(3) pp. 543-547

October 2020

["A high incidence of thrombotic events, particularly deep vein thrombosis and pulmonary embolism, has been clearly documented in COVID-19 patients. In addition, small series of patients with coronary, cerebrovascular and peripheral arterial thrombotic events have also been reported, but their true incidence and consequences are not well described, and constitute the objective of this study."]

[Stroke code presentations, interventions, and outcomes before and during the COVID-19 pandemic](#)

Jasne, A.S. et al

Stroke, vol. 51(9) pp. 2664-2673

September 2020

["Anecdotal reports suggest fewer patients with stroke symptoms are presenting to hospitals during the coronavirus disease 2019 (COVID-19) pandemic. We quantify trends in stroke code calls and treatments at 3 Connecticut hospitals during the local emergence of COVID-19 and examine patient characteristics and stroke process measures at a Comprehensive Stroke Center (CSC) before and during the pandemic."]

Neuroscience & Neuroimaging

[Neurologic and neuroimaging findings in patients with COVID-19: A retrospective multicentre study](#)

Kremer, S. et al

Neurology, vol. 95(13)

September 2020

[The aim of this retrospective multicentre study (11 hospitals in France) was to describe neuroimaging findings and to report the epidemiologic and clinical characteristics of patients with coronavirus disease 2019 (COVID-19) with neurologic manifestations. The study included 64 patients (43 male, 21 female) with confirmed COVID-19 and neurologic manifestations who underwent a brain MRI.]

[Neurological manifestations of COVID-19: available evidences and a new paradigm](#)

Khatoon, F. et al

Journal of Neurovirology, vol. 26(5) pp. 619-630

October 2020

[The authors reviewed evidence of nervous system involvement and known neurological manifestations in COVID-19 infections caused by SARS-CoV-2. They prioritised the 332 human targets of SARS-CoV-2, according to association with brain-related disease, and identified 73 candidate genes. These 73 genes were prioritised according to their spatio-temporal expression in the different regions of brain and also through evolutionary intolerance analysis.]

Rehabilitation

[Association between phonation and the vowel quadrilateral in patients with stroke: A retrospective observational study](#)

Park, E.J. et al

Medicine, vol. 99(39)

September 2020

[The purpose of this study was to assess the association between phonation abilities and the vowel quadrilateral in stroke patients with pronunciation and phonation disorders. The resonance frequency was measured for the four corner vowels to measure the vowel space area (VSA) and formant centralization ratio (FCR). Phonation ability was evaluated by the Dysphonia Severity Index (DSI) and maximal phonation time (MPT) through acoustic evaluation for each vowel. Pearsons correlation analysis was performed to confirm the association, and multiple linear regression analysis was performed between variables.]

[Motivational strategies for stroke rehabilitation: A Delphi Study](#)

Oyake, K. et al

Archives of Physical Medicine & Rehabilitation, vol. 101(11) pp. 1929-1936

November 2020

[The primary objective was to provide a list of effective motivational strategies based on consensus among rehabilitation experts (N=198), generated using the Delphi technique. Experts were physicians, physical therapists, occupational therapists, and speech-language-hearing therapists who had worked in stroke rehabilitation for at least five years. The secondary objective was to identify the types of information that are important when selecting motivational strategies.]

[Motor imagery for gait rehabilitation after stroke](#)

Silva, S. et al

The Cochrane Database of Systematic Reviews 2020, Issue 9. Art. No.: CD013019

September 2020

[The objective of this systematic review was to assess the treatment effects of motor imagery for enhancing ability to walk among people following stroke. The reviewers searched the Cochrane Stroke Group registry, CENTRAL, MEDLINE, Embase and seven other databases. They also searched trial registries and reference lists. The last searches were conducted in February 2020. RCTs using motor imagery alone or associated with action observation, or physical practice to improve gait in individuals after stroke, were selected. The critical outcome was the ability to walk, assessed using either a continuous variable (walking speed) or a dichotomous variable (dependence on personal assistance). Important outcomes included walking endurance, motor function, functional mobility, and adverse events.]

Risk of Stroke

[Nomogram to predict risk for early ischemic stroke by non-invasive method](#)

Chen, S. et al

Medicine, vol. 99(39)

September 2020

[To improve stroke prevention efforts among high-risk groups, the authors aimed to develop a scientific nomogram for non-invasive risk prediction for early ischemic stroke. Data were obtained from 2,151 patients with early ischemic stroke from October 2017 to September 2018, and from 1,527 healthy controls at the Second Affiliated Hospital of Dalian Medical University in China. Risk factors were examined using logistic regression analyses.]

[Preceding infection and risk of stroke: An old concept revived by the COVID-19 pandemic](#)

South, K. et al

International Journal of Stroke, vol. 15(7) pp. 722-732

October 2020

["In this review we draw on emerging studies of the current pandemic and data from earlier, viral epidemics, to describe possible mechanisms by which SARS-CoV-2 may influence the prevalence of stroke, with a focus on the thromboinflammatory pathways, which may be perturbed. Some of these potential mechanisms are not novel but are, in fact, long-standing hypotheses linking stroke with preceding infection that are yet to be confirmed. The current pandemic may present a renewed opportunity to better understand the relationship between infection and stroke and possible underlying mechanisms."]

Thrombolysis and Thrombectomy

[Endovascular thrombectomy in acute ischemic stroke patients with COVID-19: prevalence, demographics, and outcomes](#)

de Havenon, A. et al

Journal of NeuroInterventional Surgery, vol. 12(11) pp. 1045-1048

November 2020

[This study aimed to compare the outcome of acute ischemic stroke (AIS) patients who received endovascular thrombectomy (EVT) with confirmed COVID-19 to those without. A retrospective analysis was performed using the Vizient Clinical Data Base, a healthcare analytics platform employed by participating US hospitals, and included hospital discharges from April 1 to July 31 2020 with ICD-10 codes for AIS and EVT. The primary outcome was in-hospital death and the secondary outcome was favourable discharge, defined as discharge home or to acute rehabilitation. Patients with laboratory-confirmed COVID-19 were compared to those without. As a sensitivity analysis, COVID-19 AIS patients who did not undergo EVT were compared to those who did, to balance potential adverse events inherent to COVID-19 infection.]

[Mechanical thrombectomy for acute ischaemic stroke during the COVID-19 pandemic: changes to UK practice and lessons learned](#)

McConachie, D. et al

Clinical Radiology, vol. 75(10)

October 2020

[The aim of this study was to describe evolving practices in the provision of mechanical thrombectomy (MT) services across the UK during the COVID-19 pandemic, the responses of and impact on MT teams, and the effects on training. The UK Neurointerventional Group (UKNG) and the British Society of Neuroradiologists (BSNR) sent out a national survey on 1 May 2020 to all 28 UK neuroscience centres that have the potential capability to perform MT. Responses were received from 27/28 MT-capable centres (96%).]

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