This monthly Current Awareness Bulletin is produced by the Library, Musgrove Park Academy to provide staff with a range of stroke-related resources to support practice. It includes recently published guidelines and research articles, news and policy items.

This guide provides a selection of resources relevant to the subject area and is not intended to be a comprehensive list. All websites have been evaluated and details are correct at the time of publications.

Details correct at time of going to print. Please note that resources are continuously updated.

For further help or guidance, please contact a member of library staff.

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February 2017
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Please note that abstracts are not always available for all articles.

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1. **Nursing-Based Dysrhythmia Detection on a Dedicated Stroke Unit Using a Unit-Based Cardiac Telemetry Monitoring System.**

   **Author(s):** Jastrzebski, Cheryl; Hernandez, Erika; Nadis, Susan; Lichtenberg, Robert

   **Source:** The Journal of cardiovascular nursing; vol. 32 (no. 2); p. 190-195

   Available in full text at [Journal of Cardiovascular Nursing](#) from EBSCOhost

   **Abstract:** BACKGROUND Acute stroke care includes cardiac rhythm monitoring in the first 24 hours. The method of monitoring varies, as do the reported findings. The nurses' role in this process can be intensive, including primary response and review of all data. Competency is critical as the acute stroke setting can be associated with life-threatening dysrhythmias as well as the detection of atrial fibrillation that affects therapy. Limited studies exist to evaluate the effectiveness of a unit-based cardiac monitoring system for which the bedside nurse has primary responsibility. **OBJECTIVE** The goal was to determine if a unit-based cardiac monitoring system for which the bedside nurse was responsible detected clinically significant dysrhythmias. **METHODS** Stroke unit nurses completed a mandatory education program on identifying common dysrhythmias and using the monitoring equipment along with a structured algorithm for cardiac dysrhythmia detection. The nurse was responsible for all alarms as well as review of their patients' data. Their findings were recorded and reviewed by a cardiology team after the 24-hour monitoring was completed. A total of 300 consecutive stokes, transient ischemic attack, and possible stroke patients were enrolled. **RESULTS** Nurses identified 96% of all significant dysrhythmias. Twenty-eight percent of the stroke patients had a dysrhythmia, of which 79% were atrial fibrillation/atrial flutter. The bedside nurses did identify all 8 new atrial fibrillation cases. **CONCLUSION** Stroke unit nurses who complete an educational program can identify dysrhythmias on their patients' unit-based cardiac monitoring systems and can improve patient outcomes.

2. **Enhanced apoptosis from early physical exercise rehabilitation following ischemic stroke**

   **Author(s):** Li F.; Geng X.; Li X.; Shen J.; Wang S.; Ding Y.; Shi W.; Zhao E.Y.; Peng C.

   **Source:** Journal of Neuroscience Research; Apr 2017; vol. 95 (no. 4); p. 1017-1024

   **Abstract:** The effectiveness of the rehabilitative benefits of physical exercise appears to be contingent upon when the exercise is initiated after stroke. The present study assessed the
A hypothesis that very early exercise increases the extent of apoptotic cell death via increased expression of proapoptotic proteins in a rat stroke model. Adult male Sprague-Dawley rats were subjected to middle cerebral artery occlusion (MCAO) for 2 hr using an intraluminal filament and assigned to four nonexercise and three exercise groups. Exercise on a Rota-Rod was initiated for 30 min at 6 hr (considered very early), at 24 hr (early), and at 3 days (relatively late) after reperfusion. At 24 hr after exercise, apoptotic cell death was determined. At 3 and 24 hr after exercise, the expression of pro- and antiapoptotic proteins was evaluated through Western blotting. As expected, ischemic stroke significantly increased the levels of apoptotic cell death. Compared with the stroke group without exercise, apoptotic cell death was further increased (P < 0.05) at 6 hr but not at 24 hr or 3 days with exercise. This exacerbated cell injury was associated with increased expression of proapoptotic proteins (BAX and caspase-3). The expression of Bcl-2, an antiapoptotic protein, was not affected by exercise. In ischemic stroke, apoptotic cell death was enhanced by very early exercise in association with increased expression of proapoptotic proteins. These results shed light on the time-sensitive effect of exercise in poststroke rehabilitation. © 2016 Wiley Periodicals, Inc. Copyright © 2016 Wiley Periodicals, Inc.

3. Apixaban to prevent stroke in patients with atrial fibrillation: a review.

Author(s): Peterson, Benjamin E; Al-Khatib, Sana M; Granger, Christopher B
Source: Therapeutic advances in cardiovascular disease; Mar 2017; vol. 11 (no. 3); p. 91-104

Abstract: Atrial fibrillation is a common, costly and morbid cardiovascular arrhythmia. Stroke prevention remains the mainstay of treatment for atrial fibrillation, and the recent advent of novel oral anticoagulants with direct factor IIa or factor Xa inhibition has significantly revolutionized this aspect of treatment for atrial fibrillation patients. This review focuses on the tolerability and efficacy of apixaban and tackles the generalizability of the findings with apixaban to broader patient populations than those primarily enrolled in the clinical trials, drawing from the AVERROES and ARISTOTLE trials and their subsequent secondary analyses. Taken together, findings from these trials show that apixaban is superior to warfarin in preventing stroke with a lower risk of major bleeding in the general population of patients with atrial fibrillation as well as in several key high-risk patient subgroups.

4. Risk factors, topographic patterns and mechanism analysis of intracranial atherosclerotic stenosis ischemic stroke.

Author(s): Wang, Yanqiang; Lu, Zhengqi; Sun, Shaoyang; Yang, Yu; Zhang, Bingjun; Kang, Zhuang; Hu, Xueqiang; Dai, Yongqiang
Source: The International journal of neuroscience; Mar 2017; vol. 127 (no. 3); p. 267-275

Abstract: The association between topographic patterns, risk factors and stroke mechanisms of ICAS in first-ever stroke remains unknown. A large sample sized retrospective study was performed on first-ever ICAS ischemic stroke using DWI and MRA. Hypertension (60.92%), cigarette smoking (26.82%), MCA (76.65%) and multiple vessels (65.37%) stenosis, were the major factors favoring different mechanisms. Subcortical lesions were the most occurring topographic patterns (41.4%). The common mechanism was LBO (66.3%). Statistical analysis showed a significant relationship between lesion patterns and mechanisms (r = 0.384, P = 0.001). Single mechanism had the higher apoB/apoA1 ratio (P = 0.005) and levels of plasma apoB (P = 0.007) compared with multiple mechanisms. The anterior circulation stroke were more multiple mechanisms as compared to the posterior circulation stroke (P = 0.001). LBO was more prevalent in posterior circulation stroke than in anterior circulation stroke (P = 0.001). The topographic patterns of ischemic lesions is helpful in early identification of different mechanisms of ICAS. Monitoring apoB and apoB/apoA1 may help to predict the mechanism of stroke with ICAS. The prevalence of mechanisms differ between anterior and posterior circulation stroke with ICAS.
5. Intervention by Speech Therapists to Promote Oral Intake of Patients with Acute Stroke: A Retrospective Cohort Study.

Author(s): Nakazora, Tomoko; Maeda, Junko; Iwamoto, Konosuke; Hanashiro, Sayori; Nakamura, Yoshikazu; Kiyozuka, Tetsuhito; Domen, Kazuhisa

Source: Journal of Stroke & Cerebrovascular Diseases; Mar 2017; vol. 26 (no. 3); p. 480-487

Abstract: Objective: Early rehabilitation for acute stroke patients is widely recommended. We tested the hypothesis that daily intervention by speech therapists promotes safe oral intake of patients with acute stroke.

Methods: We analyzed hospitalized patients who experienced cerebral infarction and cerebral hemorrhage and who underwent rehabilitation between October 2010 and September 2014 at our hospital. In total, 936 patients were analyzed, and 452 patients underwent daily speech therapy. We examined the association of training frequency and eating status.

Results: Multiple linear regression analysis indicated that daily speech therapy was correlated significantly and positively with a reduction in the number of days of hospitalization until oral intake commenced (coefficient, -.998; 95% confidence interval, -1.793 to -.202; P < .05), and was not correlated with the cessation of oral intake due to aspiration pneumonia after resuming oral intake.

Conclusion: Our retrospective cohort study demonstrated that daily intervention by speech therapists in patients with acute stroke shortens the number of days until oral intake without increasing the incidence of aspiration pneumonia.

6. A depression screening protocol for patients with acute stroke: a quality improvement project

Author(s): McIntosh, Celia

Source: Journal of Neuroscience Nursing; Feb 2017; vol. 49 (no. 1); p. 39-48

Abstract: Background: Depression after stroke is common and is associated with poor functional recovery, suicidal ideation, decreased quality of life, and increased mortality. Despite this knowledge, poststroke depression (PSD) is often underdetected and thus undertreated. PSD is clinically important for the caregiver, the family, and the stroke survivor. Inconsistencies in screening and treatment practices may further contribute to these negative outcomes. Purpose: The purposes of this evidence-based clinical scholarship project were to (1) determine the efficacy of an evidence-based depression screening protocol in improving early detection and treatment of PSD and (2) identify if there were any relationships between the protocol interventions, depression scores, and diagnosis.

Methods: A retrospective chart review was conducted in a convenience sample of 79 hospitalized patients with acute stroke. Depression was assessed using the Patient Health Questionnaire-9. Demographic data and medical and protocol variables were also collected. Descriptive statistics, chi-square test, and Pearson correlation test were used for data analysis.

Results: Of the 79 participants, 56% were men, 65% were White, 77% were admitted with ischemic stroke, and 48% were identified as being depressed (Patient Health Questionnaire-9 depression scale > 4). Individuals with a history of depression (χ2 = 17.09, p = .002) were also more likely to have higher levels of depression severity as compared with patients who did not have a history of depression. After the intervention, patients screening positive were more likely to receive an educational booklet on stroke and depression (χ2 = 30.0, p = .000) and be medically treated for PSD before discharge (χ2 = 5.57, p = .018).

Nurses? documentation of screening results also improved (χ2 = 9.19, p = .002). Conclusion: Implementation of the Evidence Based Depression Screening and Treatment (EBDST) protocol improved early detection and treatment of PSD in the hospitalized patients with acute stroke before discharge. The EBDST protocol promoted systematic evidence-based depression screening in the hospitalized patients with acute stroke. Use of the EBDST protocol may further improve long-term health outcomes, decrease mortality, and improve functional recovery and quality of life.

References

7. Acute Ischemic Stroke Therapy Overview

Author(s): Catanese L.; Tarsia J.; Fisher M.

Source: Circulation Research; Feb 2017; vol. 120 (no. 3); p. 541-558

Available in full text at Circulation research - from Ovid fulltext collection
Abstract: The treatment of acute ischemic stroke has undergone dramatic changes recently subsequent to the demonstrated efficacy of intra-arterial (IA) device-based therapy in multiple trials. The selection of patients for both intravenous and IA therapy is based on timely imaging with either computed tomography or magnetic resonance imaging, and if IA therapy is considered non-invasive, angiography with one of these modalities is necessary to document a large-vessel occlusion amenable for intervention. More advanced computed tomography and magnetic resonance imaging studies are available that can be used to identify a small ischemic core and ischemic penumbra, and this information will contribute increasingly in treatment decisions as the therapeutic time window is lengthened. Intravenous thrombolysis with tissue-type plasminogen activator remains the mainstay of acute stroke therapy within the initial 4.5 hours after stroke onset, despite the lack of Food and Drug Administration approval in the 3 to 4.5-hour time window. In patients with proximal, large-vessel occlusions, IA device-based treatment should be initiated in patients with small/moderate-sized ischemic cores who can be treated within 6 hours of stroke onset. The organization and implementation of regional stroke care systems will be needed to treat as many eligible patients as expeditiously as possible. Novel treatment paradigms can be envisioned combining neuroprotection with IA device treatment to potentially increase the number of patients who can be treated despite long transport times and to ameliorate the consequences of reperfusion injury. Acute stroke treatment has entered a golden age, and many additional advances can be anticipated. Copyright © 2017 American Heart Association, Inc.

8. Reasoning about truth-telling in end-of-life care of patients with acute stroke

Author(s): Rejnö, Åsa; Silfverberg, Gunilla; Ternestedt, Britt-Marie

Source: Nursing Ethics; Feb 2017; vol. 24 (no. 1); p. 100

Abstract: Background: Ethical problems are a universal phenomenon but rarely researched concerning patients dying from acute stroke. These patients often have a reduced consciousness from stroke onset and thereby lack ability to convey their needs and could be described as 'incompetent' decision makers regarding their own care. Objective: The aim of the study was to deepen the understanding of stroke team members' reasoning about truth-telling in end-of-life care due to acute stroke. Research design: Qualitative study based on individual interviews utilizing combined deductive and inductive content analysis. Participants and research context: A total of 15 stroke team members working in stroke units of two associated county hospitals in western Sweden participated. Ethical considerations: The study was approved by the Regional Ethics Review Board, Gothenburg, Sweden. Findings: The main findings were the team members' dynamic movement between the categories 'Truth above all' and 'Hide truth to protect'. Honesty was highly valued and considered as a reason for always telling the truth, with the argument of truth as common morality. However, the carers also argued for hiding the truth for different reasons such as not adding extra burden in the sorrow, awaiting a timely moment and not being a messenger of bad news. Withholding truth could both be seen as a way of protecting themselves from difficult conversations and to protect others. Discussion: The results indicate that there are various barriers for truthfulness. Interpreted from a virtue of ethics perspective, withholding of truth might also be seen as an expression of sound judgement to put the patient's best interest first. Conclusion: The carers may need support in the form of supervision to be given space to reflect on their experience and thereby promote ethically justified care. Here, the multi-professional team can be of great value and contribute through inter-professional sharing of knowledge.
Reviews from January 2017

Interventions for dysarthria due to stroke and other adult-acquired, non-progressive brain injury

Protocols from January/February 2017

Remote ischaemic conditioning for preventing and treating ischaemic stroke

Interventions for the uptake of evidence-based recommendations in acute stroke settings

Activity monitors for increasing physical activity in adult stroke survivors

*NEW*

Cochrane Clinical Answers

Cochrane Clinical Answers covers 32 Clinical Specialties and provide a readable, digestible, clinically focused entry point to rigorous research from Cochrane systematic reviews. They are designed to be actionable and to inform decision making at the point of care. Each Cochrane Clinical Answer contains a clinical question, a short answer, and an opportunity to ‘drill down’ to the evidence from the Cochrane Review. The evidence is displayed in a user friendly format, mixing narrative, numbers and graphics. The target audience for Cochrane Clinical Answers is healthcare practitioners and professionals, and other informed health care decision-makers. Cochrane Clinical Answers have been developed by Cochrane Innovations Ltd. and Wiley Online Library.

Latest Clinical Answers:

January 2017

How does colchicine compare with placebo/inactive controls for the prevention of cardiovascular events?


This updated guidance calls for all patients to receive an urgent brain scan within one hour of being admitted to hospital. This edition informs healthcare professionals about what should be delivered to stroke patients and how this should be organised, with the aim of improving the quality of care for everyone who has a stroke, regardless of age, gender, type of stroke, or location. The guideline includes a detailed section on the commissioning of stroke care.

Additional link: RCP press release
NICE Guidelines

Current Guidelines

IPG561: Transcervical extracorporeal reverse flow neuroprotection for reducing the risk of stroke during carotid artery stenting - June 2016

IPG548: Mechanical clot retrieval for treating acute ischaemic stroke - February 2016

QS99: Secondary prevention after a myocardial infarction - September 2015

TA355: Edoxaban for preventing stroke and systemic embolism in people with non-valvular atrial fibrillation - September 2015

Updated Guidelines

QS100: Cardiovascular risk assessment and lipid modification - updated September 2016

PLEASE NOTE LINKS WORK BEST IN CHROME BROWSER

UpToDate – Access for Musgrove Staff only

DynaMed Plus – Access for Somerset Partnership Staff only

Please contact library staff for details on how to access these resources; you will need an Athens password if accessing from home.
NICE Pathway on Stroke

Sentinel Stroke National Audit Programme (SSNAP)

UK Stroke Forum- hosted by Stroke Association

Stroke Association website- contains information about support groups, conferences, fundraising, research and professional advice including toolkits and posters.

The Sentinel Stroke National Audit Programme- 3 reports

Post-acute organisational audit
Presents the findings on the organisation of care for stroke survivors once they leave hospital. The audit highlights the number and location of post-acute stroke services across the UK and outlines what a patient might expect in accessing these services.

Mind the Gap- Third Annual SSNAP Report
The Royal College of Physicians has published the third annual Sentinel Stroke National Audit Programme (SSNAP) report Mind the Gap! The report shows that despite stroke care continuing to improve year on year, work is still required to ensure that all patients have access to high quality care regardless of where they live or when they are admitted to hospital. SSNAP has also published 2016 acute organisational audit. This is a snapshot audit that measures the structure of stroke services in acute hospitals.

Thirteenth report from SSNAP- latest quarterly results
The Healthcare Improvement Partnership has published the thirteenth report from the Sentinel Stroke National Audit Programme (SSNAP) which reveals that 25 stroke services scored an overall ‘A’ score for the quality of care they provide for patients, demonstrating that a world class service is achievable. The report relates to patients admitted to or discharged from hospital between January and March 2016. It includes named hospital results for the entire inpatient care pathway.

Raconteur Report- Understanding Stroke
Stroke is one of the biggest health issues people face today, taking a life every 13 minutes and costing the nation an estimated £9 billion a year in health and social costs. Yet the condition ranks low in terms of public perception and research funding, and the UK lags behind some other nations in improving patient outcomes. This report highlights the need to raise research funding, along with awareness of the condition, and identifies key risk factors. It also showcases major technological and medical breakthroughs.
ABSTRACTS AVAILABLE VIA LINKS BELOW - FOR FULL-TEXT PLEASE ASK LIBRARY STAFF

Cardioembolic Stroke
Circulation Research, Originally published February 2, 2017
FREE FULL TEXT

Molecular magnetic resonance imaging discloses endothelial activation after transient ischaemic attack
Brain (2017) 140 (1): 146-157

Migraine and risk of perioperative ischemic stroke and hospital readmission: hospital based registry study
BMJ 2017;356:i6635

Pregnancy, Hormonal Treatments for Infertility, Contraception, and Menopause in Women After Ischemic Stroke
Stroke. 2017; Originally published January 9, 2017

Stroke and Mortality Risk in Patients With Various Patterns of Atrial Fibrillation
Circulation: Arrhythmia and Electrophysiology Originally published January 11, 2017

Combined Intravenous Thrombolysis and Thrombectomy vs Thrombectomy Alone for Acute Ischemic Stroke: A Pooled Analysis of the SWIFT and STAR Studies
JAMA Neurol. Published online January 9, 2017

Lifestyle Factors and Early Clinical Outcome in Patients With Acute Stroke- A Population-Based Study
Stroke. 2016; Originally published January 16, 2017

Thrombolytic removal of intraventricular haemorrhage in treatment of severe stroke: results of the randomised, multicentre, multiregion, placebo-controlled CLEAR III trial
Lancet, Volume 389, No. 10069, p603–611, 11 February 2017

Principles of precision medicine in stroke

Blood pressure levels and the risk of intracerebral hemorrhage after ischemic stroke
Neurology January 10, 2017 vol. 88 no. 2 177-181

Early Trajectory of Stroke Severity Predicts Long-Term Functional Outcomes in Ischemic Stroke Subjects
Stroke. 2017;48:105-110

Incidence of Recurrence of Childhood Arterial Ischemic Stroke
JAMA Neurol. Published online January 23, 2017.

Herpes Zoster and the Risk of Stroke in Patients With Autoimmune Diseases
Arthritis and Rheumatology, First published: 28 January 2017
Thrombolytic removal of intraventricular haemorrhage in treatment of severe stroke: results of the randomised, multicentre, multiregion, placebo-controlled CLEAR III trial
*Lancet*, 2017 389 (10069) p603-611

*Stroke*
*Lancet*, 2017 389 (10069) p641-654

Use of Intravenous Recombinant Tissue Plasminogen Activator in Acute Ischemic Stroke Patients Taking Non-Vitamin K Antagonist Oral Anticoagulants (NOACs) Before Stroke
*Circulation*. 2017; originally published January 24, 2017

Transcranial direct current stimulation for the treatment of post-stroke depression: results from a randomised, sham-controlled, double-blinded trial
*J. Neurol. Neurosurg. Psychiatr.* 2017 Feb 01;88(2)170-175

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**TRAINING & NETWORKING OPPORTUNITIES, CONFERENCES, EVENTS**

Stroke Association- Events for Professionals- ongoing events throughout the year

European Stroke Conference- 24th-26th May 2017, Berlin, Germany

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**LITERATURE SEARCH SERVICE**

Looking for the latest evidence-based research but haven’t got time to trawl the databases?

Do you need a literature search carried out?

Do you need to find evidence to support an improvement?

Do you want to know how something has been done elsewhere and whether it worked?

Library staff provide a literature search service for busy clinicians who are pressed for time.

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Please note that registering from home will take longer as it will need to be verified that you are NHS staff/student on placement.

The library offers training on how to access and use Athens resources, as well as an introductory course on critical appraisal. You can book a course through the Learning and Development intranet page, or by contacting the library directly.