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**Cochrane Systematic Reviews**

**Updated Reviews – May 2015**

*Transcranial direct current stimulation (tDCS) for improving aphasia in patients with aphasia after stroke*

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**Stroke related topics**

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**Journal Articles**

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**Journal Articles:**

1. A Qualitative Case Study of Poststroke Sexuality in a Woman of Childbearing Age

   **Citation:** Journal of Obstetric, Gynecologic, and Neonatal Nursing, Mar 2015, vol. 44, no. 2, p. 228-235, 0884-2175 (Mar-Apr 2015)

   **Author(s):** Beal, Claudia C, Millenbruch, Julie

   **Abstract:** Objective: To explore perceptions of poststroke sexuality in a woman of childbearing age. Design: Qualitative case study. Setting: Community. Participant: A 36-year-old married mother of two children with a history of acute ischemic stroke 7 months prior to interview. Methods: A semistructured interview guide was used to gather data during a single face-to-face interview. Data consisted of an audio-recorded interview and verbatim transcription, field notes, and demographic information. The inductive approach of qualitative content analysis was used to analyze the data. Results: Four main categories, Slow to Get Back to the Sexual Life, The Vulnerable Body, Crushed by the Stroke and The Inadequate Self, were used to describe how the emotional trauma of having a stroke at a young age affected the participant’s sense of self. Issues with sexuality were related to her perception of her poststroke body as vulnerable. Stage of life informed the participant’s perceptions of pre- and poststroke sexuality. Conclusion: A stroke during childbearing years may affect a woman’s perception of herself as a sexual being and her ability to carry out gender roles. [Publication] 40 references

   **Source:** BNI

2. A quality improvement programme with a specialist nurse in a neurovascular clinic

   **Citation:** Journal of Clinical Nursing, Feb 2015, vol. 24, no. 3-4, p. 386-392, 0962-1067 (February 2015)

   **Author(s):** McKee, Jacqueline, Wade, Carrie, McCarron, Mark O

   **Abstract:** Aims and objectives: To measure the impact of a quality improvement programme with a stroke specialist nurse and increased capacity at neurovascular clinics. Background: Transient ischaemic attack and minor stroke are medical emergencies prompting urgent assessment and treatment. Delays in specialist assessment and management are frequent and may increase stroke risk. Design: Pre- and post evaluation of intervention. Methods: All patients referred to a neurovascular clinic were recorded during two phases: 2006-2008 and 2010-2012. For the 2010-2012 period, a stroke specialist nurse contacted all patients with appointment details, provided driving advice and asked for an eyewitness to attend the clinic. Diagnosis, delay in specialist assessment, prevalence of transient ischaemic attack/minor stroke as confirmed at the clinic and compliance with UK driving regulations were measured and compared before and after this intervention. Results: A total of 1327 patients were assessed in the two study phases. Referrals to the neurovascular service increased without a decrease in the prevalence of transient ischaemic attack/minor stroke. Delays from clinical event to assessment were decreased for referrals from 36.5-13 days, and adherence to the UK driving restrictions improved for confirmed transient ischaemic attack/minor stroke patients from 61-94%. Fewer patients failed to attend a neurovascular appointment arranged by the stroke specialist nurse than those who failed a general neurology appointment arranged by partial booking. Conclusions: This quality improvement programme reduced delays for all referred patients, improved compliance with driving regulations and demonstrated efficient use of neurovascular clinic spaces. Increasing local capacity may unmask more transient ischaemic attack/minor stroke patients. Relevance to clinical practice: A stroke nurse can help improve the efficiency of a neurovascular clinic and improve patient safety with driving advice. [PUBLICATION] 26 references
3. Achieving eating independence in an acute stroke ward: Developing a collaborative care plan
Citation: International Journal of Therapy and Rehabilitation, Mar 2015, vol. 22, no. 3, p. 111-117, 1741-1645 (March 2015)
Author(s): Payne, Jacqueline, Stagnitti, Karen, Hooke, Emily, Hitch, Danielle
Abstract: Aim: This article outlines the development and implementation of a collaborative feeding care plan (FCP) for stroke patients in an acute stroke ward. The aim of this pilot study was to evaluate the impact of an ecological intervention to improve eating independence in an acute stroke ward environment. Methods: An action research approach comprising seven stages - determine the initial problem, develop the care plan, act, reflect and monitor progress, evaluate, reflect, and refine plan - was used to track environmental changes during the development and implementation of the FCP in an acute stroke ward in an Australian regional hospital. During the evaluation phase, six allied health staff completed a survey on the FCP. The staff also completed an observation assessment integrating the Eating Disability Scale, Functional Independence Measure and Canadian Occupational Performance Measure with 12 participants with acute stroke (participants with FCP=6; participants without FCP=6). Results: The FCP group showed significant improvements in upper limb independence (p=0.046), when comparing mean admission scores (3.5±0.97) with discharge scores (4.17±2.14). Clinically significant improvements in levels of collaboration between health professionals were also demonstrated. Conclusions: The changes in team collaboration and the patient's upper limb independence indicate how environmental change can influence acute stroke patient outcomes. It is recommended that this study be expanded to further explore the effect of ecological interventions and change. [PUBLICATION] 25 references
Source: BNI
Full text: Available EBSCOhost at International Journal of Therapy & Rehabilitation

Citation: JAMA, Apr 2015, vol. 313, no. 14, p. 1451-1462 (April 14, 2015)
Author(s): Prabhakaran, Shyam, Ruff, Ilana, Bernstein, Richard A
Abstract: Acute ischemic stroke is a major cause of mortality and morbidity in the United States. We review the latest data and evidence supporting catheter-directed treatment for proximal artery occlusion as an adjunct to intravenous thrombolysis in patients with acute stroke. To review the pathophysiology of acute brain ischemia and infarction and the evidence supporting various stroke reperfusion treatments. Systematic literature search of MEDLINE databases published between January 1, 1990, and February 11, 2015, was performed to identify studies addressing the role of thrombolysis and mechanical thrombectomy in acute stroke management. Studies included randomized clinical trials, observational studies, guideline statements, and review articles. Sixty-eight articles (N = 108,082 patients) were selected for review. Intravenous thrombolysis is the mainstay of acute ischemic stroke management for any patient with disabling deficits presenting within 4.5 hours from symptom onset. Randomized trials have demonstrated that more patients return to having good function (defined by being independent and having slight disability or less) when treated within 4.5 hours after symptom onset with intravenous recombinant tissue plasminogen activator (IV rtPA) therapy. Mechanical thrombectomy in select patients with acute ischemic stroke and proximal artery occlusions has demonstrated substantial rates of partial or complete arterial recanalization and improved outcomes compared with IV rtPA or best medical treatment alone in multiple randomized clinical trials. Regardless of mode of reperfusion, earlier reperfusion is associated with better clinical outcomes. Intravenous rtPA remains the standard of care for patients with moderate to severe neurological deficits who present within 4.5 hours of symptom onset. Outcomes for some patients with acute ischemic stroke and moderate to severe neurological deficits due to proximal artery occlusion are improved with endovascular reperfusion therapy. Efforts to hasten reperfusion therapy, regardless of the mode, should be undertaken within organized stroke systems of care.
Source: Medline
Full text: Available American Medical Association at JAMA

5. Associations between lower limb strength and gait velocity following stroke: A systematic review
Citation: Brain Injury, April 2015, vol./is. 29/4(409-422), 0269-9052;1362-301X (01 Apr 2015)
Author(s): Mentiplay B.F., Adair B., Bower K.J., Williams G., Tole G., Clark R.A.
Language: English
Abstract: Objective: The aim of this systematic review was to identify literature examining associations between
isometric strength and gait velocity following stroke. Methods: An electronic search was performed using six online databases. Targeted searching of reference lists of included articles and three relevant journals was also performed. Two independent reviewers identified relevant articles, extracted data and assessed the methodological quality of included articles. Inclusion criteria involved studies that assessed univariate correlations between gait velocity and isometric strength of individual lower limb muscle groups in a stroke population.

Results: Twenty-one studies were included for review. The majority of included studies had a relatively small sample size. After accounting for sample size and methodological quality, the knee extensors showed poor-to-moderate correlations with gait velocity while the ankle dorsiflexors showed the strongest association with gait velocity. Conclusions: Current evidence suggests that the strength of the ankle dorsiflexors has a stronger correlation to gait velocity compared with other lower limb muscle groups. Consequently, a focus on increasing ankle dorsiflexor strength to improve gait velocity following stroke may be beneficial. However, due to limitations of the research identified, further research is needed to determine the associations between lower limb strength and gait velocity following stroke.

Publication type: Journal: Review
Source: EMBASE

6. Current and future bioanalytical approaches for stroke assessment

Citation: Bioanalysis, May 2015, vol./is. 7/8(1017-1035), 1757-6180;1757-6199 (01 May 2015)
Author(s): Pullagurla S.R., Baird A.E., Adamski M.G., Soper S.A.
Language: English

Abstract: Efforts are underway to develop novel platforms for stroke diagnosis to meet the criteria for effective treatment within the narrow time window mandated by the FDA-approved therapeutic (<3 h). Blood-based biomarkers could be used for rapid stroke diagnosis and coupled with new analytical tools, could serve as an attractive platform for managing stroke-related diseases. In this review, we will discuss the physiological processes associated with stroke and current diagnostic tools as well as their associated shortcomings. We will then review information on blood-based biomarkers and various detection technologies. In particular, point of care testing that permits small blood volumes required for the analysis and rapid turn-around time measurements of multiple markers will be presented.

Publication type: Journal: Review
Source: EMBASE

7. Does the frequency of participation change after stroke and is this change associated with the subjective experience of participation?

Citation: Archives of physical medicine and rehabilitation, Mar 2015, vol. 96, no. 3, p. 456-463 (March 2015)
Author(s): Blömer, Anne-Marije V, van Mierlo, Maria L, Visser-Meily, Johanna M, van Heugten, Caroline M, Post, Marcel W

Abstract: To investigate changes in the frequency of participation 6 months poststroke compared with prestroke; and to establish whether the change is associated with participation restrictions and satisfaction with participation 6 months poststroke. Inception cohort study. Prestroke frequency of participation was measured retrospectively in the first week poststroke. Frequency, participation restrictions, and satisfaction with participation were assessed 6 months poststroke. General hospitals and home residences. Patients with stroke (N=325; 65.5% men; mean age, 66.9±12.2) admitted to 1 of 6 participating general hospitals. Not applicable. Utrecht Scale for Evaluation of Rehabilitation-Participation (0-100), which consists of 3 scales: frequency, restrictions, and satisfaction. The frequency scale consists of 2 parts: vocational activities (work, volunteer work, education, household activities) and leisure and social activities. Vocational activities showed a large decrease (effect size: 0.6) poststroke; leisure and social activities showed a small decrease (effect size: 0.13) poststroke. In multiple regression analyses, both the frequency of participation in vocational activities 6 months poststroke and the decrease in vocational activities compared with before the stroke were significantly associated with the participation restrictions experienced and satisfaction with participation after controlling for age, sex, level of education, dependency in activities of daily living, cognitive functioning, and presence of depressive symptoms. The presence of depressive symptoms showed the strongest association with the subjective experience of participation. The frequency of participation decreased after a stroke, and this decrease was associated with participation restrictions experienced and satisfaction with participation. Resuming vocational activities and screening and, if applicable, treatment of depressive symptoms should be priorities in stroke rehabilitation.

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Citation: Medicine, Mar 2015, vol. 94, no. 9, p. e520. (March 2015)

Author(s): Ashkenazi, Liat, Toledano, Ronen, Novack, Victor, Elluz, Esther, Abu-Salamae, Ibrahim, Ifergane, Gal

Abstract: Acute care of stroke victims largely relies on the rapid identification and timely clinical and radiological assessment. We evaluated the effect of the number of patient companions on the efficiency of the diagnostic process in the emergency department (ED). Consecutive stroke patients admitted to the ED between August 2011 and October 2012 were evaluated. Clinical, epidemiological, and timeline data (symptoms onset, ED arrival, computed tomography [CT] scanning, and recombinant tissue plasminogen activator infusion), as well as the number of accompanying persons in the ED were prospectively recorded. We used multivariate Poisson log linear models to analyze the association of number of companions adjusted and door-to-CT times and logistic regression for the analysis of the successful identification of stroke patient by ED triage nurse. Out of a total of 724 stroke patients admitted, data regarding number of ED companions were available for 610 (84.3%) patients. Number of companions was associated with higher National Institute of Health Stroke Scale and speech disturbances. It was found to be independently associated with shorter time to CT scanning adjusted for the stroke severity, sex, and speech disturbances (no companions as a reference group, relative risks 0.82, 0.73, and 0.70 for 1, 2, and ≥3 companions, respectively, all P

Source: Medline

9. Enteral tube feeding for dysphagic stroke patients

Citation: British Journal of Nursing, Feb 2015, vol. 24, no. 3, p. 138-145, 0966-0461 (February 12, 2015)

Author(s): Rowat, Anne

Abstract: Enteral feeding tubes, a nasogastric tube (NGT) or percutaneous endoscopic gastrostomy (PEG), are commonly used to provide nutrition, hydration and essential medications to stroke patients who cannot swallow. Early tube feeding is associated with improved survival after stroke and it is recommended that patients start tube feeding within 24 hours of hospital admission. NGT feeding is the preferred method for short-term feeding in the acute phase of stroke as it has the advantage of being easily placed at the bedside. However, there are often difficulties inserting the NGT and it can be easily dislodged by agitated and confused patients, leading to potentially fatal complications. A PEG tube is considered a more secure method of feeding stroke patients who require longer-term nutritional support, but it is an invasive procedure that can result in complications that are associated with an increased risk of morbidity and mortality after stroke. The aim of this article is to review the complications associated with enteral feeding tubes and discuss their prevention and management for stroke patients. [PUBLICATION] 52 references

Source: BNI

10. Imaging of acute stroke: CT and/or MRI

Citation: Journal of Neuroradiology, February 2015, vol./is. 42/1(55-64), 0150-9861;1773-0406 (01 Feb 2015)

Author(s): Lovblad K.-O., Altrichter S., Mendes Pereira V., Vargas M., Marcos Gonzalez A., Haller S., Sztajzel R.

Language: English

Abstract: Acute ischemic stroke is now clearly recognized as a medical emergency. As such diagnosis has to be done quickly and in a precise way during the therapeutic window. Both computed tomography and magnetic resonance imaging are tools that can adequately demonstrate ischemia really well early on. MRI using diffusion techniques has a much higher sensitivity for acute lesions but its implementation has not been unproblematic due to initial resistance and some technical problems. Thus, very often CT is still preferred with MR used for situations where the answer given is not sufficient as well as for follow-up of lesions. However, the parallel development of new therapeutic strategies have rendered the precision of the tools more and more sophisticated and their combined use can help to improve patient outcomes in ways never imagined previously. No matter which technique is used, be it alone or in combination, the idea is to speed up and optimize management in order to provide early revascularization and reperfusion.

Publication type: Journal: Review
11. Impact of a clinical pathway on end-of-life care following stroke: A mixed methods study

Citation: Palliative Medicine, Mar 2015, vol. 29, no. 3, p. 249-259, 0269-2163 (March 2015)

Author(s): Cowey, Eileen, Smith, Lorraine N, Stott, David J, McAlpine, Christine H, Mead, Gillian E, Barber, Mark, Walters, Matthew

Abstract: Background: Death after stroke is common, but little is known about end-of-life care processes in acute stroke units. Aim: (1) To identify family and health-care worker perceptions of an end-of-life care pathway for patients who die after acute stroke. (2) To determine whether patients with fatal stroke judged to require an end-of-life care pathway differ from patients with fatal stroke who die without introduction of such a pathway. Design: Mixed methods study integrating qualitative semistructured interviews with quantitative casenote review. Setting/participants: In four Scottish acute stroke units, 17 relatives of deceased stroke patients and 23 health-care professionals were interviewed. Thematic analysis used a modified grounded theory approach. Multivariate analysis was performed on casenote data, identified prospectively from 100 consecutive stroke deaths. Results: Deciding pathway use was a consultative process, occurring within normal working hours. Families were commonly involved and could veto or trigger aspects of end-of-life care. Families sometimes felt responsible for decisions such as pathway use, resuscitation or hydration. Families were often led to expect their relative’s death early in the post-stroke period. Prolonged dying processes, particularly where patients had severe dysphagia, added to distress for families. Preferences for place of care were discussed infrequently. No link was found between demographic or clinical characteristics and care pathway use. Conclusion: Distressing stroke-related clinical problems dominated relatives’ concerns rather than use of the end-of-life care pathway. At times, relatives felt primarily responsible for key aspects of decision-making. Relatives often felt unprepared for a prolonged dying process after stroke, particularly where patients had persistent major swallowing difficulties. [PUBLICATION] 52 references

Source: BNI

Full text: Available Palliative medicine at Palliative Medicine

12. Innovations in aphasia treatment after stroke: technology to the rescue

Citation: British Journal of Neuroscience Nursing, Apr 2015, vol. 11, no. 2, p. 38-42, 1747-0307 (Apr-May 2015)

Author(s): Palmer, Rebecca

Abstract: Aphasia is a common consequence of stroke which affects the ability to understand spoken language, talk, read and write. Speech and language therapy is usually offered in the first weeks and months after a person has had a stroke to try to limit the effects of this communication disability. However, treatment opportunities are often time limited due to resource issues and a traditionally held view that aphasia is unlikely to improve in its chronic phase. This article challenges these views, by briefly discussing the potential for neuro-recovery for language in the long term following stroke and presenting evidence of treatment success in chronic aphasia. Key factors in long-term treatment success are highlighted, including intensive repetitive practice, tailored practice exercises, and salient practice material. Advances in technology are also important, demonstrating how this can offer new opportunities for intensive, tailored and personalised language treatment at whatever time point a patient wishes to engage with therapy after stroke. [PUBLICATION] 34 references

Source: BNI

13. Nasogastric tubes: Complications and effects on deglutition in patients with stroke

Citation: Neurologie und Rehabilitation, 2015, vol./is. 21/2(65-71), 0947-2177 (2015)

Author(s): Heidler M.-D.

Language: German

Abstract: Nasogastric tubes are often used in acute stroke patients for enteral nutrition, but they can lead to various complications, including delayed deglutition processes, a pathogenic oral and gastric flora, gastro-esophageal reflux disease, a deprivation of cough and swallowing reflex, chronic sinusitis or ulcerations of the post cricoid region. Tubes anaesthetize the apposed mucosa and therefore influence directly cortical swallowing areas which are responsible for volitional aspects of deglutition. If a nasogastric tube is well-placed it seems to be a satisfactory option for intermittent enteral feeding in the first 14 days after acute stroke to prevent malnutrition. If enteral nutrition is expected to take longer than 28 days an (always individual) decision concerning a PEG has to be reached.

Publication type: Journal: Review
14. Organisation, practice and experiences of mouth hygiene in stroke unit care: a mixed-methods study

**Citation:** Journal of Clinical Nursing, Mar 2015, vol. 24, no. 5-6, p. 728-738, 0962-1067 (March 2015)

**Author(s):** Horne, Maria, McCracken, Giles, Walls, Angus, Tyrrell, Pippa J, Smith, Craig J

**Abstract:** To investigate the organisation, provision and practice of oral care in typical UK stroke units; (2) explore stroke survivors', carers' and healthcare professionals' experiences and perceptions about the barriers and facilitators to receiving and undertaking oral care in stroke units. Cerebrovascular disease and oral health are major global health concerns. Little is known about the provision, challenges and practice of oral care in the stroke unit setting, and there are currently no evidence-based practice guidelines. Cross-sectional survey of 11 stroke units across Greater Manchester and descriptive qualitative study using focus groups and semi-structured interviews. A self-report questionnaire was used to survey 11 stroke units in Greater Manchester. Data were then collected through two focus groups (n = 10) with healthcare professionals and five semi-structured interviews with stroke survivors and carers. Focus group and interview data were recorded, transcribed verbatim and analysed using framework approach. Eleven stroke units in Greater Manchester responded to the survey. Stroke survivors and carers identified a lack of oral care practice and enablement by healthcare professionals. Healthcare professionals identified a lack of formal training to conduct oral care for stroke patients, inconsistency in the delivery of oral care and no set protocols or use of formal oral assessment tools. Oral care post-stroke could be improved by increasing healthcare professionals' awareness, understanding and knowledge of the potential health benefits of oral care post-stroke. Further research is required to develop and evaluate the provision of oral care in stroke care to inform evidence-based education and practice. Development of staff training and education, and evidence-based oral care protocols may potentially benefit patient care and outcomes and be implemented widely across stroke care. [PUBLICATION] 43 references

**Source:** BNI

15. Orthoses to improve rehabilitation after stroke

**Citation:** British Journal of Neuroscience Nursing, Apr 2015, vol. 11, no. 2, p. 23-30, 1747-0307 (Apr-May 2015)

**Author(s):** Jilks, Helen, Seccombe, Steve

**Abstract:** The term 'orthosis' applies to an external device which is worn to aid function and mobility, reduce pain and accommodate deformities. This includes several types of devices from a simple wrist brace to highly complex bespoke devices such as a knee-ankle-foot orthosis. The aim of this article is to provide an overview of the role of orthotists, to discuss the important use of orthotics immediately following a stroke and to raise awareness of orthotic services, which will improve both the quality outcomes and service to the patient. [PUBLICATION] 31 references

**Source:** BNI

16. Post stroke pain: Identification, assessment, and therapy

**Citation:** Cerebrovascular Diseases, May 2015, vol./is. 39/3-4(190-201), 1015-9770;1421-9786 (06 May 2015)

**Author(s):** Harrison R.A., Field T.S.

**Language:** English

**Abstract:** Background: Pain is a common complication after stroke and is associated with the presence of depression, cognitive dysfunction, and impaired quality of life. It remains underdiagnosed and undertreated, despite evidence that effective treatment of pain may improve function and quality of life. Summary: We provide an overview of the means for clinical assessment and risk factors for the development of post-stroke pain, then review the newest available literature regarding the commonest post-stroke pain syndromes, including central post-stroke pain, complex regional pain syndrome, musculoskeletal pain including shoulder subluxation, spasticity-related pain, and post-stroke headache, as well as the available epidemiology and current treatment options. Key Messages: In the best interests of optimizing quality of life and function after stroke, clinicians should be aware of pain as a common complication after stroke, identify those patients at highest risk, directly inquire as to the presence and characteristics of pain, and should be aware of the options for treatment for the various pain syndromes.

**Publication type:** Journal: Review

**Source:** EMBASE
17. Prevention of recurrent stroke in patients with patent foramen ovale

Citation: Neurologic Clinics, May 2015, vol./is. 33/2(491-500), 0733-8619;1557-9875 (01 May 2015)
Author(s): Wessler B.S., Kent D.M.
Language: English
Abstract: Patent foramen ovale (PFO) is common and only rarely related to stroke. The high PFO prevalence in healthy individuals makes for difficult decision making when a PFO is found in the setting of a cryptogenic stroke, because the PFO may be an incidental finding. Recent clinical trials of device-based PFO closure have had negative overall summary results; these trials have been limited by low recurrence rates. The optimal antithrombotic strategy for these patients is also unknown. Recent work has identified a risk score that estimates PFO-attributable fractions based on individual patient characteristics, although whether this score can help direct therapy is unclear.
Publication type: Journal: Review
Source: EMBASE

18. Proof of principle of a brain-computer interface approach to support poststroke arm rehabilitation in hospitalized patients: design, acceptability, and usability.

Citation: Archives of physical medicine and rehabilitation, Mar 2015, vol. 96, no. 3 Suppl, p. S71. (March 2015)
Author(s): Morone, Giovanni, Pisotta, Iolanda, Pichiorri, Floriana, Kleih, Sonja, Paolucci, Stefano, Molinari, Marco, Cincotti, Febo, Kübler, Andrea, Mattia, Donatella
Abstract: To evaluate the feasibility of brain-computer interface (BCI)-assisted motor imagery training to support hand/arm motor rehabilitation after stroke during hospitalization. Proof-of-principle study. Neurorehabilitation hospital. Convenience sample of patients (N=8) with new-onset arm plegia or paresis caused by unilateral stroke. The BCI-based intervention was administered as an "add-on" to usual care and lasted 4 weeks. Under the supervision of a therapist, patients were asked to practice motor imagery of their affected hand and received as a discrete feedback the movements of a "virtual" hand superimposed on their own. Such a BCI-based device was installed in a rehabilitation hospital ward. Following a user-centered design, we assessed system usability in terms of motivation, satisfaction (by means of visual analog scales), and workload (National Aeronautics and Space Administration-Task Load Index). The usability of the BCI-based system was also evaluated by 15 therapists who participated in a focus group. All patients successfully accomplished the BCI training. Significant positive correlations were found between satisfaction and motivation (P=.001, r=.393). BCI performance correlated with interest (P=.027, r=.257) and motivation (P=.012, r=.289). During the focus group, professionals positively acknowledged the opportunity offered by BCI-assisted training to measure patients' adherence to rehabilitation. An ecological BCI-based device to assist motor imagery practice was found to be feasible as an add-on intervention and tolerable by patients who were exposed to the system in the rehabilitation environment.
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Source: Medline
Full text: Available ARCHIVES OF PHYSICAL MEDICINE AND REHABILITATION at Archives of Physical Medicine and Rehabilitation


Citation: Journal of Advanced Nursing, Mar 2015, vol. 71, no. 3, p. 676-687, 0309-2402 (March 2015)
Author(s): Savini, Serenella, Buck, Harleah G., Dickson, Victoria Vaughan, Simeone, Silvio, Pucciarelli, Gianluca, Fida, Roberta, Matarrese, Maria, Alvaro, Rosaria, Vellone, Ercole
Abstract: Aim. To describe a new conceptual framework and the research protocol of a study designed to examine the quality of life in stroke survivor-caregiver dyads. Background. Stroke has a significant impact on the patient-caregiver dyad. Few studies have been guided by a specific conceptual framework which considers the interactions among pre-existing situations prior to stroke, the new situation caused by the stroke and the moderating effects of environmental and caregiver-related variables. Design. Longitudinal study. Methods. A sample of stroke survivor-caregiver dyads will be enrolled at patient discharge from rehabilitation hospitals and will be surveyed every 3 months for 1-year. Hypotheses generated from the conceptual framework will test predictors, mediators and moderators of stroke survivor and caregiver quality of life from the pre-existing situation prior to the stroke, the new situation mediation poststroke and situation moderators. The study is supported by a grant from the Centre of Excellence for Nursing Scholarship, Rome, December 2013. Discussion. This study seeks to identify variables in the pre-existing situation prior to the stroke (e.g. living condition), the
new situation mediation poststroke (e.g. type of stroke and caregiver burden) as well as situation moderators (e.g. social support) that influence stroke survivor-caregiver dyad's quality of life across the stroke trajectory. Also, the study will inform clinical practice and research by identifying variables that are potentially modifiable and therefore amenable to intervention. The proposed framework will also be helpful for future research focused on stroke survivor-caregiver dyads. [PUBLICATION] 78 references

Source: BNI


Citation: Current Treatment Options in Neurology, 2015, vol./is. 17/3, 1092-8480;1534-3138 (2015)

Author(s): Roth C., Alli O.

Language: English

Abstract: Patent foramen ovale (PFO) has been linked to stroke, presumably through the mechanism of paradoxical embolism; however, data is confusing regarding the causal relationship between PFO and embolic stroke. What has come to light in the past decade of research is that PFO closure with devices that achieve a high rate of closure may reduce the risk of recurrent stroke compared with medical therapy, but this benefit has not been shown in the general population with a PFO and cryptogenic stroke. The important question now is which patient will benefit from PFO closure for stroke risk reduction. A validated risk prediction tool is needed to help physicians determine those patients who will derive benefit from closure of PFO to prevent recurrent stroke. It is clear that even in studies with a small number of individuals and a very small number of events, there is some benefit to closure. Furthermore, improvements in closure devices and techniques have made percutaneous device closure both safe and efficacious. As such, it is not necessary to wait for a patient to have two strokes prior to serious consideration of PFO closure. We would advocate that the decision to close a PFO in the setting of a cryptogenic stroke be made at an individual level, on a case-by-case basis. Patients with high-risk features may be more likely to benefit, though who exactly comprises this population is still being elucidated. The most difficult aspect of managing this disease is the substantial number of individuals with incidental PFOs, as well as the prevalence of stroke due to other etiologies. When treating this disease, the physician must be able to weigh the likelihood of benefit versus the risk of the procedure, as well as patient preference.

Publication type: Journal: Review

Source: EMBASE

21. Stroke and pregnancy: an integrative review with implications for neuroscience nurses

Citation: Journal of Neuroscience Nursing, Apr 2015, vol. 47, no. 2, p. 76-84, 0888-0395 (April 2015)

Author(s): Beal, Claudia C., Faucher, Mary Ann

Abstract: Stroke in association with pregnancy is an infrequent occurrence, but there is evidence that the incidence is rising. The physiological changes of pregnancy are thought to increase stroke risk, and several conditions specific to pregnancy further increase risk. The provision of optimal care to pregnant and postpartum women who experience stroke requires awareness of how the physiological changes of pregnancy may affect the course of stroke and nursing actions. This article provides an overview of current knowledge about pregnancy-related stroke including underlying pathophysiology, risk factors unique to pregnancy, and treatment issues when stroke is a complication of pregnancy. Implications for the nursing care of women with pregnancy-related stroke and maternal child considerations are discussed. [PUBLICATION] 59 references

Source: BNI

22. Stroke: Risk assessment to prevent recurrence after mild stroke or TIA

Citation: Nature Reviews Neurology, March 2015, vol./is. 11/3(131-133), 1759-4758;1759-4766 (14 Mar 2015)

Author(s): Yu A.Y.X., Coutts S.B.

Language: English

Abstract: Stroke has a heavy socioeconomic burden. A subset of patients with transient or nondisabling cerebral ischaemic events will experience recurrent stroke, leading to permanent deficits. Two new studies tackle the challenge of identifying the patients most at risk for recurrent stroke via examination of radiological and serum biomarkers.

Publication type: Journal: Review

Source: EMBASE
23. Stroke-specific training for nurses

Citation: British Journal of Neuroscience Nursing, Apr 2015, vol. 11, no. 2, p. 6-8, 1747-0307 (Apr-May 2015)

Author(s): Owen, Nikki

Abstract: The National Stroke Strategy (Department of Health (DH), 2007), is a 10-year stroke plan that set out to outline the features of a good service and has helped to drive improvements in stroke care. The quality markers (QM) in the Strategy that directly refer to training are QM18 and QM19 - which state that ‘all people with stroke and at the risk of stroke, receive care from staff with the skills, competence and experience appropriate to meet their needs’, and that ‘commissioners and employers undertake a review of the current workforce and develop a plan supporting development and training to create a stroke-skilled workforce’. [PUBLICATION] 6 references

Source: BNI

24. The impact of stroke unit care on outcome in a Scottish stroke population, taking into account case mix and selection bias.

Citation: Journal of neurology, neurosurgery, and psychiatry, Mar 2015, vol. 86, no. 3, p. 314-318 (March 2015)

Author(s): Turner, Melanie, Barber, Mark, Dodds, Hazel, Dennis, Martin, Langhorne, Peter, Macleod, Mary Joan, Scottish Stroke Care Audit

Abstract: Randomised trials indicate that stroke unit care reduces morbidity and mortality after stroke. Similar results have been seen in observational studies but many have not corrected for selection bias or independent predictors of outcome. We evaluated the effect of stroke unit compared with general ward care on outcomes after stroke in Scotland, adjusting for case mix by incorporating the six simple variables (SSV) model, also taking into account selection bias and stroke subtype. We used routine data from National Scottish datasets for acute stroke patients admitted between 2005 and 2011. Patients who died within 3 days of admission were excluded from analysis. The main outcome measures were survival and discharge home. Multivariable logistic regression was used to estimate the OR for survival, and adjustment was made for the effect of the SSV model and for early mortality. Cox proportional hazards model was used to estimate the hazard of death within 365 days. There were 41 692 index stroke events; 79% were admitted to a stroke unit at some point during their hospital stay and 21% were cared for in a general ward. Using the SSV model, we obtained a receiver operated curve of 0.82 (SE 0.002) for mortality at 6 months. The adjusted OR for survival at 7 days was 3.11 (95% CI 2.71 to 3.56) and at 1 year 1.43 (95% CI 1.34 to 1.54) while the adjusted OR for being discharged home was 1.19 (95% CI 1.11 to 1.28) for stroke unit care. In routine practice, stroke unit admission is associated with a greater likelihood of discharge home and with lower mortality up to 1 year, after correcting for known independent predictors of outcome, and excluding early non-modifiable mortality. Published by the BMJ Publishing Group Limited. For permission to use (where not already granted under a licence) please go to http://group.bmj.com/group/rights-licensing/permissions.

Source: Medline

Full text: Available Highwire Press at Journal of neurology, neurosurgery, and psychiatry

25. The Preventive Antibiotics in Stroke Study (PASS): a pragmatic randomised open-label masked endpoint clinical trial.

Citation: Lancet, Apr 2015, vol. 385, no. 9977, p. 1519-1526 (April 18, 2015)


Abstract: In adults with acute stroke, infections occur commonly and are associated with an unfavourable functional outcome. In the Preventive Antibiotics in Stroke Study (PASS) we aimed to establish whether or not preventive antimicrobial therapy with a third-generation cephalosporin, ceftriaxone, improves functional outcome in patients with acute stroke. In this multicentre, randomised, open-label trial with masked endpoint assessment, patients with acute stroke were randomly assigned to intravenous ceftriaxone at a dose of 2 g, given every 24 h intravenously for 4 days, in addition to stroke unit care, or standard stroke unit care without preventive antimicrobial therapy; assignments were made within 24 h after symptom onset. The primary endpoint was functional outcome at 3 months, defined according to the modified Rankin Scale and analysed by intention to treat. The primary analysis was by ordinal regression of the primary outcome. Secondary outcomes included death, infection rates, antimicrobial use, and length of hospital stay. Participants and caregivers were
26. Towards a better understanding of readmissions after stroke: partnering with stroke survivors and caregivers

**Citation:** Journal of Clinical Nursing, Apr 2015, vol. 24, no. 7-8, p. 1091-1100, 0962-1067 (April 2015)

**Author(s):** White, Carole L, Brady, Tracy L, Saucedo, Laura L, Motz, Deb, Sharp, Johanna, Birnbaum, Lee A

**Abstract:** Top of Form To describe the experience of readmission from the perspective of the stroke survivor and family caregiver. Older stroke survivors are at an increased risk for readmission with approximately 40% being readmitted in the first year after stroke. Patients and their families are best positioned to provide information about factors associated with readmission, yet their perspectives have rarely been elicited. Descriptive qualitative study. This study included older stroke survivors who were readmitted to acute care from home in the six months following stroke, and their family caregivers. Participants were interviewed by telephone at approximately two weeks after discharge and a sub-set was also interviewed in person during the readmission. Interviews were audio-taped and content analysis was used to identify themes. From the 29 semi-structured interviews conducted with 20 stroke survivors and/or their caregivers, the following themes were identified: preparing to go home after the stroke, what to expect at home, complexity of medication management, support for self-care in the community and the influence of social factors. This study provides the critical perspective of the stroke survivor and family caregiver into furthering our understanding of readmissions after stroke. Participants identified several areas for intervention including better discharge preparation and the need for support in the community for medication management and self-care. The findings suggest that interventions designed to reduce readmissions after stroke should be multifaceted in approach and extend across the continuum of care. The hospital level has been the focus of interventions to reduce preventable readmissions, but the results of this study suggest the importance of community-level care. The individual nature of each situation must be taken into account, including the postdischarge environment and the availability of social support. [PUBLICATION] 35 references

**Source:** BNI

27. Transcranial non-invasive brain stimulation in swallowing rehabilitation following stroke - A review of the literature

**Citation:** Physiology and Behavior, May 2015, vol./is. 143/(1-9), 0031-9384;1873-507X (May 01, 2015)

**Author(s):** Doeltgen S.H., Bradnam L.V., Young J.A., Fong E.

**Language:** English

**Abstract:** Background: This descriptive review of the literature outlines the current evidence-base underpinning the potential of transcranial brain stimulation techniques to modulate swallowing function in healthy individuals and in treating post-stroke dysphagia. Methods: Published research was identified by review of scientific databases (Scopus, Medline Ovid, Science Direct, AMED and Google Scholar) using relevant keywords. In addition, the reference lists of identified articles were scrutinized to identify further potentially relevant papers. Studies employing variants of transcranial magnetic or direct current stimulation for the purpose of modulating swallowing motor cortical excitability in healthy participants or dysphagia following stroke were included. Due to a significant heterogeneity in stimulation paradigms, all included studies were summarised and descriptively analysed in relation to the participants tested, cortical representations targeted by brain stimulation and outcome measures used. Results: Seventeen studies met inclusion criteria (seven evaluating healthy participants, 10 evaluating participants presenting with post-stroke dysphagia). Cortical stimulation most commonly targeted pharyngeal motor representations (13/17 studies). In the 10 clinical studies, stimulation was applied

**Source:** Medline

**Full text:** Available Lancet at [Lancet, The](https://www.thelancet.com)

**Note:** Aware of treatment allocation but assessors of outcome were masked to group assignment. This trial is registered with controlled-trials.com, number ISRCTN66140176. Between July 6, 2010, and March 23, 2014, a total of 2550 patients from 30 sites in the Netherlands, including academic and non-academic medical centres, were randomly assigned to the two treatment groups: 1275 patients to ceftriaxone and 1275 patients to standard treatment (control group). 12 patients (seven in the ceftriaxone group and five in the control group) withdrew consent immediately after randomisation, leaving 2538 patients available for the intention-to-treat-analysis (1268 in the ceftriaxone group and 1270 in the control group). 2514 (99%) of 2538 patients (1257 in each group) completed 3-month follow-up. Preventive ceftriaxone did not affect the distribution of functional outcome scores on the modified Rankin Scale at 3 months (adjusted common odds ratio 0.95 [95% CI 0.82-1.09], p=0.46). Preventive ceftriaxone did not result in an increased occurrence of adverse events. Overgrowth infection with Clostridium difficile occurred in two patients.
contralesionally (5/10 studies), ipsilesionally (3/10 studies) or bilaterally (2/10 studies). A range of behavioural and neurophysiological outcome measures demonstrated positive effects on swallowing function across studies. Conclusion: There is promising proof of concept that non-invasive brain stimulation may provide a useful adjunct to post-stroke swallowing rehabilitation practice. Eventual transition of optimal paradigms into routine clinical practice will be accompanied by practical considerations in relation to local and national frameworks, e.g. the prescription and provision of treatment.

**Publication type:** Journal: Review

**Source:** EMBASE

28. **Update on management options for dysphagia after acute stroke**

**Citation:** British Journal of Neuroscience Nursing, Apr 2015, vol. 11, no. 2, p. 10-19, 1747-0307 (Apr-May 2015)

**Author(s):** Beavan, Jessica

**Abstract:** Stroke is the most common cause of acute dysphagia, leading to under-nutrition and pneumonia. It has a major impact on quality of life, institutionalisation, feeding-tube dependency and death. This article will review recent research in dysphagia management in acute stroke, updating a previous article in 2013 (Beavan, 2013).

[PUBLICATION] 94 references

**Source:** BNI

29. **Using the Gugging Swallowing Screen (GUSS) for Dysphagia Screening in Acute Stroke Patients**

**Citation:** Journal of Continuing Education in Nursing, Mar 2015, vol. 46, no. 3, p. 103-104, 0022-0124 (March 2015)

**Author(s):** John, Jennilee St, Berger, Linley

**Abstract:** Aspiration pneumonia from dysphagia following stroke presents significant morbidity and mortality in that population. Dysphagia screening before oral intake has been a standard of care for years, but there is a lack of consensus on the best screening tool. The Gugging Swallowing Screen (GUSS) is presented as a potentially better alternative to other dysphagia screens due to its safer progression of oral intake, more thorough evaluation of swallowing, and ability to enable earlier nutrition. [Publication] 6 references

**Source:** BNI

**Full text:** Available ProQuest at [Journal of Continuing Education in Nursing, The](http://example.com)

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**News**

**Air pollution linked to silent strokes**

Friday 24th April 2015

"Adults who live in towns and cities suffer ageing of the brain and increased risk of dementia and [silent] strokes because of air pollution," The Daily Telegraph reports. A "silent stroke" (technically known as a covert brain infarct) are small areas of damage caused by lack of oxygen to the brain tissue, but are not severe enough to cause obvious symptoms.

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**Training & Networking, Conferences & Events**

[Stroke Association Training and Resources for Professionals](http://example.com)

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