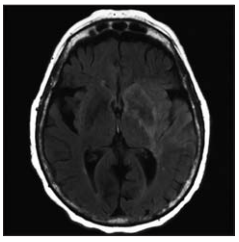
ANESTHESIOLOGY

Jean Mantz, M.D., Ph.D., Editor

Acute myocardial infarction: A comparison of short-term survival in national outcome registries in Sweden and the UK. Lancet 2014; 383:1305–12.

International research for acute myocardial infarction (AMI) lacks comparison of whole health systems. Therefore, time trends for care and outcome extracted from national registries of patients having been admitted into one of all hospitals providing care for AMI in the United Kingdom and Sweden between 2004 and 2010 were analyzed. Clinically important differences between countries were found in AMI care and outcomes, supporting impact of healthcare system on outcome of patients with AMI. International comparisons research might help to improve health systems and prevent deaths. *(Summary: J. Mantz. Image: J.P. Rathmell.)*



Door-to-needle times for tissue plasminogen activator administration and clinical outcomes in acute ischemic stroke before and after a quality improvement initiative. JAMA 2014; 311:1632–40.

Time to thrombolysis is crucial for outcome in acute ischemic stroke; however, less than 30% of patients benefit from thrombolysis within the recommended 60 min door-to-needle time, which severely compromises outcome. This pre-/postinterventional study performed on 71,139 patients with acute ischemic stroke examined the impact of 10 care strategies to achieve faster door-to-needle time for tissue plasminogen activator (tPA) administration. It was shown that this national quality improvement resulted in improved timeliness of tPA administration, lower in-hospital mortality and intracranial hemorrhage, along with an increase in the percentage of patients discharged to home. *(Summary: J. Mantz. Image: J.P. Rathmell.)*

Effect of the use of ambulance-based thrombolysis on time to thrombolysis in acute ischemic stroke: A randomized clinical trial. JAMA 2014; 311:1622–31.

Of the strategies that can improve the percentage of patients with acute ischemic stroke within the recommended 60-min door-to-needle time, starting thrombolysis in specialized ambulances may reduce delays and therefore potentially improve outcome. In this randomized controlled trial including 6,182 patients, the intervention comprised an ambulance (STEMO) equipped with a computed tomography scanner, point-of-care laboratory, and telemedicine connection, a stroke identification algorithm at dispatcher level, and a prehospital stroke team. Thrombolysis was started before transport to hospital if ischemic stroke was confirmed and contraindications excluded. Compared with usual care, the use of ambulance-based thrombolysis resulted in decreased time to treatment without an increase in adverse events. *(Summary: J. Mantz. Image: From EMS Solutions International [http://emssolutionsint.blogspot.com/]; used with permission.)*

The impact of postoperative complications on long-term quality of life after curative colorectal cancer surgery. Ann Surg 2014; 259:916–23.

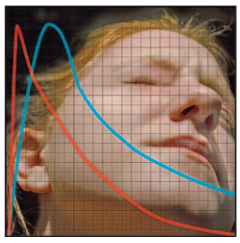
Colorectal cancer surgery is associated with a high rate of postoperative complications, but their impact on long-term outcome has not been adequately investigated. Among the 794 patients from the Medical Research Council trial of conventional *versus* laparoscopic-assisted surgeryin colorectal cancer (MRC-CLASICC), 614 were included and their quality of life prospectively examined until 36 months after surgery. Postoperative complications have adverse effects on long-term physical, role, and social functioning; body image; mobility; self-care; and pain/discomfort. These findings should inform future preoperative counseling and health care planning. *(Summary: J. Mantz. Image: J.P. Rathmell.)*

Albumin replacement in patients with severe sepsis or septic shock. N Engl J Med 2014; 370:1412–21.

The therapeutic value of albumin replacement for septic shock remains to be clarified. This multicenter, open-label, randomized trial included 1,818 patients with severe sepsis in intensive care units to receive either 20% albumin (target concentration 30g/l) and crystalloid solution or crystalloid solution alone. It was found that mortality at Days 28 and 90 did not differ between intervention and control groups. However, a significant improved survival rate was found at Day 90 postrandomization in a *post hoc* analysis of patients with septic shock *versus* no shock. *(Summary: J.F. Pittet. Image: NOAA/Wikimedia Commons.)*

High *versus* low blood-pressure target in patients with septic shock. N Engl J Med 2014; 370:1583–93.

It is uncertain whether the Surviving Sepsis Campaign recommendations targeting a mean arterial pressure of at least 65 mmHg during initial resuscitation of patients with septic shock are effective. A multicenter, open-label trial was conducted of 776 patients with septic shock randomized to undergo resuscitation with a mean arterial pressure target of either 80 to 85 mmHg (high-target group) or 65 to 70 mmHg (low-target group). No difference in mortality at either 28 or 90 days was found between the two groups. These findings leave open the discussion as to whether a target "best blood pressure level" can be recommended in patients with septic shock. *(Summary: J.F. Pittet. Image: J.P. Rathmell.)*



A randomized, double-blind, double-dummy comparison of short- and long-acting dihydrocodeine in chronic non-malignant pain. Pain 2014; 155:881–8.

A long-standing tenet of opioid management for chronic pain is that sustained-acting drugs and formulations should be used in preference to short-acting compounds. The reasons given for this recommendation include better overall pain control, lower risk of addiction, less dose escalation, better pain control at night, *etc*. Unfortunately, little empirical evidence has been provided supporting these hoped-for advantages. In their recent study, Pedersen *et al*. enrolled 60 patients suffering from chronic pain and randomized them to receive either a short- or sustained-acting preparation of dihydrocodeine. No differences were identified for pain stability (the primary endpoint), average pain, sleep, or quality of life. These are highly significant data that may alter clinical practice since other studies show the use of long-acting drugs is associated with higher rates of adverse effects and greater risk of overdose. *(Summary: J.D. Clark. Image: J.P. Rathmell.)*

Hand-off education and evaluation: Piloting the observed simulated hand-off experience (OSHE). J Gen Intern Med 2010; 25:129–34; Can residents improve patient handover through peer feedback? Med Educ 2014; 48:534–5.

Hand-offs are an essential method to transfer patient information from one physician to another in the operating room and intensive care unit. Education to better prepare physicians to accomplish effective and efficient hand-offs has been sparse. Chasnovitz and Dandekar implemented peer observation with feedback and Farnan *et al*. conducted observed simulated hand-off experience (OSHE); both educational activities were designed to enhance the effectiveness of the patient care information transfer. Peer observation and feedback resulted in a jump from 35% to 77% and OSHEs improved perceived effectiveness in hand-offs from 27% to 67%. Education is change in behavior based upon experience(s). These two studies demonstrate that education exists to learn how best to hand off patient care information. *(Summary: A.J. Schwartz. Image: J.P. Rathmell.)*