

Dear friends of clinical journal club - load the file down at <https://www.mdc-berlin.de/cjc>. This website also gives you access to my seminar on Wednesdays 16:00 English and 17:00 German. You need to click on *Besprechung beizutreten*. If it fails to work immediately, keep on clicking.

A 44-year-old man presented to the emergency department with a 3-day history of vision loss and pain in the left eye. The symptoms had started after he had passed out for 3 hours in a position that put pressure on his left eye; before losing consciousness, he had taken insomnia medications and consumed alcohol. An anterior segment examination showed hemorrhagic chemosis and a fixed, mid-dilated pupil (left). The intraocular pressure in the left eye was normal. Funduscopy showed diffuse retinal whitening, a finding consistent with infarction, and optical coherence tomography revealed full-thickness retinal edema. Magnetic resonance imaging of the orbit showed engorgement of the extraocular muscles and orbital tissue (right). A diagnosis of ischemic retinopathy and choroidopathy owing to prolonged orbital compression was made. Which of the following is LEAST likely to be found on physical examination in this patient? You are offered: Absence of light perception in the left eye, A relative afferent pupillary defect, Complete ophthalmoplegia of the left eye, Proptosis, Vertical nystagmus. The MRI image gives the answer. Dengue, or breakbone fever, is a mosquito borne disease common in warm climates. Dengue can cause a lethal shock syndrome. A vaccine against all 4 strains has not been invariably successful. Butantan–Dengue Vaccine (Butantan-DV) is an investigational, single-dose, live, attenuated, tetravalent vaccine against (all forms) dengue disease, but data on its overall efficacy are needed. In an ongoing phase 3, double-blind trial in Brazil, investigators randomly assigned participants to receive Butantan-DV or placebo, with stratification according to age (2 to 6 years, 7 to 17 years, and 18 to 59 years); 5 years of follow-up is planned. The objectives of the trial were to evaluate overall vaccine efficacy against symptomatic, virologically confirmed dengue of any serotype occurring more than 28 days after vaccination (the primary efficacy end point), regardless of serostatus at baseline, and to describe safety up to day 21 (the primary safety end point). The vaccine efficacy was about 80% (mostly strains 1 and 2), but not all strains occurred in the study. Studies evaluating surgical-site infection have had conflicting results with respect to the use of alcohol solutions containing iodine povacrylex or

chlorhexidine gluconate as skin antiseptics before surgery to repair a fractured limb (i.e., an extremity fracture). In a cluster-randomized, crossover trial at 25 hospitals in the United States and Canada, surgeons randomly assigned hospitals to use a solution of 0.7% iodine povidone in 74% isopropyl alcohol (iodine group) or 2% chlorhexidine gluconate in 70% isopropyl alcohol (chlorhexidine group) as preoperative antiseptics for surgical procedures to repair extremity fractures. Every 2 months, the hospitals alternated interventions. Separate populations of patients with either open or closed fractures were enrolled and included in the analysis. The primary outcome was surgical-site infection. Iodine povidone was declared the winner, but the difference was <1% and then only in closed fractures. Niemann–Pick disease type C is a rare lysosomal storage disorder that is not sphingomyelinase-mutation dependent. Investigators evaluated the safety and efficacy of N-acetyl-L-leucine (NALL), an agent that potentially ameliorates lysosomal and metabolic dysfunction, for the treatment of Niemann–Pick disease type C. In a double-blind, placebo-controlled, crossover trial, they randomly assigned patients 4 years of age or older with genetically confirmed Niemann–Pick disease type C in a 1:1 ratio to receive NALL for 12 weeks, followed by placebo for 12 weeks, or to receive placebo for 12 weeks, followed by NALL for 12 weeks. NALL or matching placebo was administered orally two to three times per day, with patients 4 to 12 years of age receiving weight-based doses (2 to 4 g per day) and those 13 years of age or older receiving a dose of 4 g per day. The primary end point was the total score on the Scale for the Assessment and Rating of Ataxia. NALL beat placebo in this study. Shutting down certain genes with CRISPR editing is now possible (recall transthyretin). Hereditary angioedema is a rare genetic disease that leads to severe and unpredictable swelling attacks. NTLA-2002 is an in vivo gene-editing therapy based on CRISPR–Cas9. NTLA-2002 targets the gene encoding kallikrein B1 (KLKB1), with the goal of lifelong control of angioedema attacks after a single dose. In a phase 1 dose-escalation portion of a combined phase 1–2 trial of NTLA-2002 in adults with hereditary angioedema, investigators administered NTLA-2002 at a single dose of 25 mg, 50 mg, or 75 mg. Plasma kallikrein was markedly reduced, attacks were reduced, and no adverse events occurred in the few patients studied. The N Engl J Med review is on new cardiac-implantable devices. The weekly N Engl J Med mystery patient is a woman who underwent gastric bypass for obesity

20 years earlier and now develops a hyperkeratinization syndrome involving mostly the genitourinary tract. In the Lancet, we inspect the effect of computer decision support alerts, tailored to intensive care units. A randomized controlled trial showed that administered high-risk combinations could be reduced. Endoscopic retrograde cholangiopancreatography (ERCP) is complicated by pancreatitis. NSAIDs (indomethacin) reduces this risk. A new Lancet study shows that prophylactic pancreatic stenting further reduces the risk. Typhoid fever (Salmonella sepsis) is still common in some parts of the world. Vaccines are available. A conjugate vaccine in Malawi had an efficacy of 70-80%. The Lancet case has anti-GABA receptor encephalitis. The Lancet review is on HIV epidemiology. The N Engl J Med board examination question concerns antibiotic treatment of fulminant, acute joint infection in a drug addict. In Science Magazine, we encounter a novel form of interoception to inform the brain of what the heart is doing. In the British Journal of Sports Medicine, we learn that the most effective exercise to lower blood pressure is not aerobic training, but rather simple wall squats. Join me on Tuesday (this week), February 6, 2024. Best regards, Fred Luft, at <https://www.mdc-berlin.de/cjc>