Intramuscular midazolam for status epilepticus

Securing intravenous access is difficult in a patient having a seizure. A double-blind, randomized trial conducted in Ann Arbor compared the efficacy of intramuscular midazolam with intravenous lorazepam in patients with status epilepticus. At the time of arrival in the emergency department, 329 of 448 subjects (73.4%) in the intramuscular midazolam group and 282 of 445 (63.4%) in the intravenous lorazepam group had no seizures (p<0.001). The need for endotracheal intubation and recurrence of seizures did not differ between the two groups and the rates of adverse events were similar. The initial use of intramuscular midazolam could substantially improve care for patients with status epilepticus (N Engl J Med 2012;366:591–600).

BRCA2 mutations and prognosis of ovarian carcinoma

Mutations in the BRCA1 and BRCA2 tumour-suppressor genes are seen in 10% of women with epithelial ovarian cancers. The effect of these mutations on prognosis is unclear. A pooled analysis evaluated 26 observational studies including data from 1213 women with epithelial ovarian cancer who had BRCA1 (n=909) or BRCA2 (n=304) mutations and 2666 non-carriers. The 5-year overall survival was 36% in non-carriers, 44% in BRCA1 carriers and 52% in BRCA2 carriers. These differences persisted after adjustment for stage, grade, histology and age at diagnosis. The authors concluded that the presence of a germline mutation in BRCA1 or BRCA2 leads to higher survival rates in women with epithelial ovarian cancer, with the best survival in women having a BRCA2 mutation (JAMA 2012;307:382–9. doi: 10.1001/jama.2012.20).

Statins and the risk of diabetes mellitus

The Women’s Health Initiative study evaluated data on 161 808 postmenopausal women in the USA from their recruitment in 1993 to 1998 till analysis in 2005. The use of statins was assessed at baseline and at year 3 and incident diabetes mellitus was recorded annually. At baseline, 7.04% of participants were taking statins. There were 10 242 newly diagnosed people with diabetes during the study period. Statin use at baseline was associated with a reduced risk of diabetes, with a hazard ratio of 1.71. The association persisted after adjusting for multiple confounders. Although the absolute excess of people with diabetes in those taking statins is small, these results may further dampen the enthusiasm for the use of statins for primary prevention of cardiovascular disease (Arch Intern Med 2012;172:144–52. doi:10.1001/archinternmed.2011.625).

Immunosuppression following liver transplantation

Investigators at the University of California, San Francisco, assessed the feasibility of withdrawing immunosuppression in children who had received a liver transplant from a living parent. In this multicentre, open-label study, 20 children were enrolled who had received a liver transplant for indications other than viral hepatitis or an autoimmune disease. The median age at transplantation was 6.9 months, and at enrolment 8.5 years. The patients had stable allograft function and had no evidence of rejection. Immunosuppression was gradually withdrawn over 3 years and the patients were followed up for a median of 32.9 months. Following complete withdrawal of immunosuppression, 12 patients maintained normal allograft function for a median of 35.7 months. Follow-up liver biopsies done more than 2 years after withdrawal of the drugs showed no significant changes compared to baseline biopsies. One patient was excluded from the study. In the 7 children who developed rejection, immunosuppression was re-started with return to baseline allograft function (JAMA 2012;307:283–93).

Cardiovascular function in children born through assisted reproduction

Little information is available on the long-term health of children born using assisted reproductive techniques (ART). Swiss researchers assessed flow-mediated dilatation of the brachial artery, pulse wave velocity and carotid intima–media thickness (measures of systemic vascular function) and pulmonary artery pressure at high altitude (a measure of pulmonary vascular function) in 65 healthy children born through ART and 57 healthy controls. All measures of vascular function were significantly worse in children born through ART as compared to normally conceived siblings. The authors hypothesize that manipulation of the microenvironment of the embryo may predispose to vascular dysfunction in later life (Circulation 2012 doi:10.1161/CIRCULATIONAHA.111.071183).

Antibiotics for acute rhinosinusitis

A randomized, placebo-controlled trial recruited 166 adults with acute, uncomplicated rhinosinusitis. Of these, 85 were randomized to 1500 mg/day of amoxycillin in three divided doses and 81 to placebo. Symptomatic relief of pain, fever, cough and nasal congestion was provided to all patients. Changes in the Sinonasal Outcome Test-16 were assessed on days 3, 7, 10 and 28 by a telephonic interview. The two groups did not differ on any measure with the exception of Outcome Test scores and transient improvement in symptoms reported only on day 7, which was better in the group given amoxycillin. The results could lead to fewer prescriptions for antibiotics for uncomplicated rhinosinusitis (JAMA 2012;307:885–92).

Amanitadine for severe traumatic brain injury

The antiviral drug amantadine is often used in patients with depressed consciousness levels following trauma to the brain. In a randomized trial from New Jersey, 184 in-patients who were in a vegetative or minimally conscious state 4–16 weeks following brain trauma, were randomized to receive amantadine or placebo for 4 weeks followed by a 2-week drug-free period. Functional recovery was assessed using the Disability Rating Scale. Recovery was significantly faster during the first 4 weeks in those given amantadine. However, this effect was lost once the drug was stopped (N Engl J Med 2012;366:819–26).

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