Clinical shorts

Rate of intravenous rehydration in pediatric gastroenteritis: Rapid intravenous rehydration is no better than standard intravenous rehydration in children with mild to moderate dehydration associated with gastroenteritis. In a blinded randomized clinical trial, 226 children aged 3 months to 11 years who had dehydration secondary to gastroenteritis, had not responded to oral hydration and had been prescribed intravenous rehydration were assigned to receive either rapid (60 mL/kg) or standard (20 mL/kg) rehydration with 0.9% saline over one hour. Subsequent fluids were administered to children in both groups using the same protocol. Hydration status was assessed at baseline and every half-hour up to four hours using a validated scale. At two hours, 36% of those in the rapid group and 30% of those in the standard group were rehydrated (difference 6.5%, 95% confidence interval –5.7 to 18.7). Even after adjustment for weight, baseline hydration and serum pH, the two groups were similar in the proportion of children who were rehydrated at two and four hours and who required prolonged treatment. More children were admitted to hospital at the index visit in the rapid treatment group (33 v. 19, $p = 0.04$). Given these findings and the potential adverse effects of rapid rehydration, the authors stress that its routine use should probably be avoided in children with gastroenteritis. See *BMJ* 2011;343:d6976 doi:10.1136/bmj.d6976.

An abbreviated treatment course in latent tuberculosis: The use of rifapentine plus isoniazid for three months was as effective as nine months of isoniazid alone in preventing tuberculosis in an open-label randomized noninferiority trial comparing these two regimens. In this multicountry trial, 7731 participants (2 years of age or older) who were at high risk of progression from latent tuberculosis to active disease were randomized to receive directly observed therapy with rifapentine plus isoniazid once per week for three months or to receive nine months of self-administered daily isoniazid. Over 33 months of follow-up, tuberculosis developed in 0.19% (7/3986) participants in the combination group compared with 0.43% (15/3745) in the isoniazid group. Although completion rates were higher in the combination group (82.1% v. 69.0%, $p < 0.001$), rates of permanent discontinuation because of an adverse event were slightly higher in this group (4.9% v. 3.7%, $p = 0.009$). The authors caution that the high completion rate seen in the combination group may have been a consequence of direct observation; adherence and effectiveness may be lower if the medications are self-administered. See *N Engl J Med* 2011; 365:2155-66.

ADHD medications and cardiovascular disease: Use of medications for attention deficit hyperactivity disorder (ADHD) in young or middle-aged adults does not appear to be associated with increased risk of serious cardiovascular events. In a retrospective population-based cohort study, each participant ($n = 150\ 359$) between the age of 25 and 64 years who took medications for ADHD was matched to two nonusers. Electronic health records were searched for serious cardiovascular events, including myocardial infarction, sudden cardiac death or stroke. During 806 182 person-years of follow-up, 1357 cases of myocardial infarction, 296 cases of sudden cardiac death and 575 cases of stroke occurred. The adjusted rate ratio of serious cardiovascular events was 0.83 (95% confidence interval [CI] 0.72 to 0.96) when comparing current use with nonuse. There was also no evidence of increased risk associated with current use compared with those who had stopped more than a year earlier. Even in those who began taking the medications as adults, there did not seem to be increased risk with any specific medication or with longer duration of use. See *JAMA* 2011;306: doi:10.1001/jama.2011.1830.

Natural history of self-harm in adolescents: Most self-harming behaviours in adolescents resolve spontaneously, say the authors of a prospective population-based cohort study. A random sample of almost 2000 adolescents recruited from 44 schools in Australia were followed from a mean age of 15.9 (standard deviation [SD] 0.49) years to a mean age of 29.0 (SD 0.59) years. In the adolescent phase, 10% (95/947) of girls and 6% of boys (54/855) reported self-harm. By late adolescence, however, most of those who had reported self-harm during adolescence reported no further self-harm in young adulthood. Girls (13/888) were more likely to continue to self-harm than boys (1/764) in adulthood. Several factors were independently associated with self-harm, including symptoms of depression and anxiety (hazard ratio [HR] 3.7, 95% confidence interval [CI] 2.4 to 5.9) and antisocial behaviour (HR 1.9, 95% CI 1.1 to 3.4). Substance use, such as high-risk alcohol and cannabis use and cigarette smoking, was also associated with self-harm. The authors suggest that adolescents who self-harm often have mental health problems that might not resolve without treatment, which indicates an opportunity for early intervention. See *Lancet* 2011; DOI:10/1016/S0140-6736(11)61141-0.

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