

Masala

New drug for hyperkalaemia

The Patiromer (RLY5016) in the Treatment of Hyperkalemia in Patients With Hypertension and Diabetic Nephropathy (AMETHYST-DN) trial evaluated a novel potassium-binder polymer in outpatients with hyperkalaemia. This phase 2, multicentre, open-label, randomized trial evaluated the drug in 306 outpatients with type 2 diabetes with reduced glomerular filtration rate and serum potassium level >5.0 mEq/L. Patients received one of three randomized starting doses of patiromer—4.2 g, 8.4 g or 12.6 g twice daily. The mean reduction from baseline in serum potassium level at week 4 ranged from 0.35 mEq/L to 0.97 mEq/L. Reductions in potassium levels were maintained over 52 weeks of follow-up. Hypomagnesaemia (7.2%) was the most common treatment-related adverse event (*JAMA* 2015;**314**:151–61).

Kidney donation by expanded criteria donors

In a multicentric study at four referral centres in France, researchers assessed the long-term outcomes of renal transplantation using expanded criteria donors (ECD) compared to standard criteria donors (SCD). ECDs are deceased donors aged ≥ 60 years or aged 50–59 years with vascular comorbid conditions. A validation cohort included patients from four other referral centres in France. The study included 6891 patients (2763 in the principal cohort, 4128 in the validation cohort). Of 2763 transplants performed, 916 (33.2%) used ECD kidneys. Patients receiving ECD transplants had lower allograft survival after 7 years than those receiving SCD transplants (80% v. 88%). The main independent determinants of long-term allograft loss were allocation of ECDs (hazard ratio 1.84), presence of circulating donor-specific anti-HLA antibodies (DSA) on the day of transplantation (HR 3.0), and longer cold ischaemia time. Reducing the cold ischaemia time to <12 hours and screening for DSA in the recipient improved graft survival of organs from ECD (*BMJ* 2015;**351**:h3557).

Outcomes in patients with ductal carcinoma in situ

In an observational study on 108 196 women diagnosed to have ductal carcinoma *in situ* (DCIS) from 1988 to 2011 in the Surveillance, Epidemiology, and End Results (SEER) 18 registries database, the risk of death due to breast cancer was compared with that of women in the general population. The mean age at diagnosis of DCIS was 53.8 years and the mean follow-up was 7.5 years. At 20 years, the overall breast cancer-specific mortality was 3.3%. It was higher for women who received a diagnosis before 35 years of age (hazard ratio 2.58). A total of 517 patients died of breast cancer following a diagnosis of DCIS. Among patients who had lumpectomy, radiotherapy was associated with a reduction in the risk of ipsilateral invasive recurrence but not of breast cancer-specific mortality at 10 years (*JAMA Oncol*, published online 20 Aug 2015. doi:10.1001/jamaoncol.2015.2510).

All work and no play ... may give Jack a stroke!

To assess the relationship between work hours and cardiovascular outcomes, researchers did a meta-analysis of 25 studies from 24 cohorts in Europe, the USA and Australia. The meta-analysis of coronary heart disease comprised data for 603 838 persons with a mean follow-up of 8.5 years

(4768 events) and that for stroke comprised data for 528 908 persons with a mean follow-up of 7.2 years (1722 events). Compared with standard hours (35–40 hours per week), working long hours (≥ 55 hours per week) was associated with a 13% increase in the risk of incident coronary heart disease and a 33% increase in incident stroke. There was a dose-response association for stroke, with a 10% increase for 41–48 hours, 27% increase for 49–54 hours, and a 33% increase for ≥ 55 working hours per week compared with standard working hours. Workaholics beware (*Lancet* 2015, published online 20 Aug 2015. doi: <http://dx.doi.org/10.1016/>)!

Starting antiretroviral treatment: The sooner the better

The START (Strategic Timing of Antiretroviral Treatment) trial randomly assigned 4685 HIV-positive adults with a CD4+ count of >500 cells/cmm to start antiretroviral therapy immediately (immediate initiation group, $n=2326$) or to defer it until the CD4+ count fell to 350 cells/cmm or AIDS developed (deferred initiation group, $n=2359$). The primary composite end-point was any serious AIDS-related event, serious non-AIDS-related event, or death from any cause. The trial was stopped prematurely after a mean follow-up of 3 years. At study entry, the median HIV viral load was 12 759 copies/ml, and the median CD4+ count was 651 cells/cmm. The primary end-point occurred in 1.8% of patients in the immediate initiation group and in 4.1% of patients in the deferred initiation group (hazard ratio 0.43; *N Engl J Med* 2015;**373**:795–807).

Selective serotonin reuptake inhibitors (SSRIs) and birth defects

Data were analysed from a multicentre population-based case-control study of birth defects at 10 centres in the USA. A total of 17 952 mothers of infants with birth defects and 9857 mothers of infants without birth defects, were included in the study. SSRI use was assessed in the month before through the third month of pregnancy. Sertraline was the most commonly reported SSRI, but none of the five previously reported birth defects associated with sertraline was confirmed. For nine previously reported associations between maternal use of SSRI and birth defect in infants, findings were consistent with no association. Only paroxetine and fluoxetine were found to increase the risk of certain birth defects. Overall, SSRI use is safe in pregnancy but fluoxetine and paroxetine need to be avoided (*BMJ* 2015;**350**:h3190).

Total knee arthroplasty in patients with rheumatoid arthritis

To compare the benefits of total knee arthroplasty (TKA) in patients with rheumatoid arthritis (RA) and osteoarthritis (OA), researchers in Omaha compared indices of pain and health-related quality of life (HRQOL). Of 18 897 patients with arthritis, 834 of those with RA (5.3%) and 315 of those with OA (10.2%) had undergone index TKA at similar mean ages (65 and 68 years). TKA, significant improvements were observed for most domains of pain, function and HRQOL in both disease groups, with greater impact in OA. Although improvement was less marked in patients with RA, the results suggest that significant functional benefits accrue in these patients making the procedure worthwhile (*Arthritis Rheumatol* 2015, published online 26 Aug 2015, doi: 10.1002/art.39221).

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