Masala

Treating hypertension: Time to shift the goalposts?

The Systolic Blood Pressure Intervention Trial (SPRINT) was a multicentric study that randomly assigned 9361 non-diabetic patients with a systolic blood pressure ≥130 mmHg with an increased cardiovascular risk to a systolic blood pressure target of <120 mmHg (intensive treatment, *n*=4678) or <140 mmHg (standard treatment, *n*=4683). The trial was halted early after a median follow-up of 3.26 years as the intensive-treatment group had lower rates of several important outcomes, including heart failure (38% lower risk), death from cardiovascular causes (43% lower risk), and death from any cause (27% lower risk). Rates of some serious adverse events such as hypotension, syncope, electrolyte abnormalities, and acute kidney injury were, however, higher in the intensive-treatment group. Is it time to re-define the goals for treatment of blood pressure (*N Engl J Med* 2015;**373:** 2103–16)?

It takes COURAGE to leave stable ischaemic heart disease (IHD) alone!

The Clinical Outcomes Utilizing Revascularization and Aggressive Drug Evaluation (COURAGE) trial compared the long-term outcomes of percutaneous coronary intervention (PCI) in patients with stable IHD. Between June 1999 and January 2004, investigators randomized 2287 patients with stable IHD to an initial management strategy of optimal medical therapy alone or optimal medical therapy and PCI. Using social security numbers, the researchers tracked survival from the original cohort. Extended survival information was available for 1211 patients. The median duration of follow-up was 6.2 years (range 0 to 15 years). A total of 561 deaths occurred: 284 (25%) in the PCI group and 277 (24%) in the medical therapy group, a non-significant difference. Medical therapy alone should suffice for patients with stable IHD (*N Engl J Med* 2015;**373:**1937–46).

Mediterranean diet (Md) with olive oil lowers risk of breast cancer

The PREDIMED (PREvención con DIeta MEDiterránea) study was a randomized, single-blind, controlled primary prevention trial conducted in Spain. From 2003 to 2009, a total of 4282 women aged 60 to 80 years and at high cardiovascular disease risk were randomly allocated to an Md supplemented with extra-virgin olive oil, an Md supplemented with mixed nuts, or a control diet (advice to reduce dietary fat). Of these women, 4152 did not have a history of breast cancer. After a median follow-up of 4.8 years, there were 35 confirmed incident cases of breast cancer. A significant reduction in the risk of breast cancer (68%) was seen only in the group assigned to the Md with extra-virgin olive oil (*JAMA Intern Med* 2015;**175:**1094–103).

Drug treatment for pre-exposure prophylaxis of HIV infection

The France Recherche Nord et Sud Sida-HIV et Hépatites (ANRS) Intervention Préventive de l'Exposition aux Risques avec et pour les Gays (IPERGAY) study randomized 400 HIV-negative men having unprotected anal sex with men to either taking a combination of tenofovir disoproxil fumarate (TDF) and emtricitabine (FTC) (*n*=199) or placebo (*n*=201) before and after sexual activity. The study drug was to be taken as a loading dose of two pills with food 2 to 24 hours before sex, followed by a third pill 24 hours later and a fourth pill another 24 hours later. Participants also received risk-reduction counselling and condoms. After a median follow-up of 9.3 months, 16 HIV-1 infections occurred, 2 in the TDF-FTC group and 14 in the placebo group (relative reduction in the TDF-FTC group of 86%). The rates of serious adverse events were similar in the two study groups (*N Engl J Med* 2015;**373:**2237–46).

Falling for alpha blockers?

Investigators from Canada used administrative datasets from the province of Ontario, Canada, to generate a cohort of 147 084 men aged ≥66 years who had taken a prostate-specific alpha antagonist (tamsulosin, alfuzosin or silodosin) between June 2003 and December 2013. An equal sized cohort who did not initiate alpha antagonist therapy was also studied. The primary outcome was an emergency room visit or inpatient admission for a fall or fracture in the 90 days after exposure. Men exposed to one of the drugs had a significantly increased risk of falling (odds ratio 1.14) and of sustaining a fracture (odds ratio 1.16), compared with the unexposed cohort. Hypotension and head trauma were also significantly increased in the exposed cohort (*BMJ* 2015;**351:**h5398).

Physician, heal thyself!

Researchers compared the prevalence of burnout and satisfaction with work–life balance in physicians and other US workers in 2014 compared to 2011. Burnout was measured using validated metrics, and satisfaction with work–life balance was assessed using standard tools. Of the 35 922 physicians who received an invitation to participate, 6880 completed surveys. At least one symptom of burnout was reported by 54.4% physicians in 2014 compared with 45.5% in 2011. Satisfaction with work–life balance declined from 48.5% in 2011 to 40.9% in 2014. For non-physicians, rates of burnout in 2014 were 28.4% and those of satisfaction with work–life balance were 61.3%, figures similar to the 2011 values. Those working in Preventive Medicine had the lowest rates of burnout and the highest satisfaction rates with their work–life balance. The highest prevalence of burnout was seen in physicians working in Emergency Medicine; neurosurgeons were least satisfied with their work–life balance (*Mayo Clin Proc* 2015;**90:**1600–13).

A PATHWAY to treating resistant hypertension

The Prevention and Treatment of Hypertension With Algorithm-based therapy-2 (PATHWAY-2) trial was a double-blind, placebo-controlled, crossover trial. It enrolled patients aged 18 to 79 years with hypertension who failed to meet blood pressure goals despite treatment for at least 3 months with maximally tolerated doses of three drugs (resistant hypertension). Patients rotated, in a pre-assigned, randomized order, through 12 weeks of once daily treatment with each of spironolactone (25–50 mg), bisoprolol (5–10 mg), doxazosin modified release (4–8 mg), and placebo, in addition to their baseline treatment. Between 2009 and 2014, a total of 285 patients received spironolactone, 282 doxazosin, 285 bisoprolol and 274 placebo; 230 patients completed all treatment cycles. Spironolactone produced higher average reduction in home systolic blood pressure compared to placebo (–8.70 mmHg), doxazosin (–4.03 mmHg) and bisoprolol (–4.48 mmHg) (*Lancet* 2015;**386:**2059–68).

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