Lowering the risk of cancer in diabetes

In an observational study, 6103 patients with type 2 diabetes were followed up for a median period of 4.9 years. Overall, 271 patients developed a malignancy. At baseline, patients with incident cancers were older, had longer disease duration of diabetes, higher alcohol and tobacco use, and higher systolic blood pressure and albuminuria, but lower triglyceride levels and estimated glomerular filtration rate. After adjusting for covariables, new treatments with metformin, thiazolidinedione, sulphonylurea, insulin, statins and RAS inhibitors were associated with reduced risk of cancer. Patients with all three risk factors of HbA1c ≥7%, non-use of RAS inhibitors and non-use of statins had four-fold adjusted higher risk of cancer than those without any risk factors. This is compelling evidence for better glycaemic control and use of statins and RAS blockers (BMC Med 2014;12:76).

FDA rejects labelling aspirin for primary prevention

The role of aspirin in the secondary prevention of cardiovascular events is well established. Bayer Healthcare had filed a citizen petition requesting the US Food and Drug Administration (FDA) to approve a change in the labelling of aspirin to include the use of 75 mg to 325 mg for primary prevention of myocardial infarction. Before rejecting the petition, the FDA considered six trials of primary prevention using aspirin and the results of their pooled analyses. The primary end-point of reduction in non-fatal myocardial infarction was not met in any of the trials. Even after considering more recent trials which enrolled high-risk patients such as those with diabetes mellitus, the conclusions remained unaltered. At the same time, there was a significant increase in the risk of bleeding with aspirin therapy in all these trials (http://www.regulations.gov/#/documentDetail;D=FDA-1977-N-0018-0101 accessed on 12 May 2014).

Belgium legalizes euthanasia for children

In February 2014, the Belgian Act on Euthanasia (2002) was amended to permit euthanasia for children who are experiencing ‘constant and unbearable suffering’. Euthanasia is now permitted in Belgium in such children of all ages provided the child and the parents give voluntary and explicit consent, the child does not suffer from an intellectual disability or mental illness, and a multidisciplinary team carefully examines the child’s capacity for discernment. This decision has led to an intensive debate on the ethical aspects of euthanasia as seen in two recent articles (JAMA 2014;311:1961–2 and JAMA 2014;311:1963–4).

New oral drug for rheumatoid arthritis

Tofacitinib is an oral, small-molecule Janus kinase (JAK) inhibitor for the treatment of rheumatoid arthritis. In a phase 3 trial of tofacitinib, 958 patients with active rheumatoid arthritis were randomized to receive 5 mg or 10 mg of tofacitinib twice daily or methotrexate at a dose that was incrementally increased to 20 mg per week over 8 weeks; 956 patients received a study drug. At the end of 6 months of follow-up, radiological changes, though minimal in all groups, were significantly less in patients given tofacitinib. The clinical response rates were also significantly higher in the tofacitinib group. However, herpes zoster developed in 4% of patients given the new drug compared to 1.1% of those given methotrexate. Levels of creatinine and low density lipoprotein were also elevated in the tofacitinib group.

These promising results should be seen with a note of caution (N Engl J Med 2014;370:2377–86).

New guidelines for prevention of secondary stroke

The American Heart Association (AHA) and the American Stroke Association have updated the guidelines for the prevention of stroke in patients who have previously had a stroke or transient ischaemic attack. Revisions include the specification of a blood pressure of ≥140/90 mmHg for initiation of antihypertensive treatment, a goal blood pressure of <140/90 mmHg and the use of statins in line with the recent 2013 recommendations of the American College of Cardiology (ACC)/AHA. New recommendations address screening for diabetes and for obesity; lowering dietary salt consumption and adoption of a Mediterranean-style diet. The new guidelines also discuss the use of carotid endarterectomy and carotid artery stenting in suitable candidates. Special situations such as valvular heart disease, atrial fibrillation, cardiomyopathy and myocardial infarction are also considered (Stroke 2014 doi: 10.1161/STR.0000000000000024).

Pirfenidone for idiopathic pulmonary fibrosis

Few effective treatment options are available for idiopathic pulmonary fibrosis. In a multicentre phase 3 trial, 555 patients with idiopathic pulmonary fibrosis were randomized to receive oral pirfenidone (2403 mg daily) or placebo. In the pirfenidone group, there was a relative reduction of 47.9% in the proportion of patients who died or had an absolute decline of 10% or more in the predicted forced vital capacity (FVC). There was also a relative increase of 132.5% in the proportion of patients with no decline in FVC. Pirfenidone also improved progression-free survival. In a pre-specified pooled analysis incorporating results from two previous phase 3 trials, the between-group difference favouring pirfenidone was significant for death from any cause and from idiopathic pulmonary fibrosis. Gastrointestinal and skin-related adverse events were more common in the pirfenidone group but rarely led to discontinuation of treatment (N Engl J Med 2014;370:2083–92).

Hypertension and cardiovascular outcomes

Using linked electronic health records from 1997 to 2010, researchers assembled a cohort of 1.25 million patients who were ≥30 years of age and initially free from cardiovascular disease. One-fifth of patients were receiving blood pressure-lowering treatments. During a median follow-up of 5.2 years, there were 83,098 initial cardiovascular disease presentations. In each age group, the lowest risk for cardiovascular disease was in those with systolic blood pressure of 90–114 mmHg and diastolic blood pressure of 60–74 mmHg, with no evidence of a J-shaped increased risk at lower blood pressures. Associations with high systolic blood pressure were strongest for intracerebral haemorrhage, subarachnoid haemorrhage and stable angina. Raised systolic blood pressure had a greater effect on angina, myocardial infarction and peripheral arterial disease, whereas raised diastolic blood pressure had a greater effect on abdominal aortic aneurysm. People with hypertension had a lifetime risk of overall cardiovascular disease at 30 years of age of 63.3% compared with 46.1% for those with normal blood pressure, and developed cardiovascular disease 5 years earlier (Lancet 2014;383:1899–911).

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