Ann Robinson’s research reviews—22 September 2022

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Buckling under pressure

Children break their wrists with alarming ease and frequency. The commonest type of fracture in children is a torus (from the Latin for protuberance) or buckle fracture, in which the soft, compressible radius and ulna bend or crack under the impact of a fall but don’t break into the cortex. Approaches to treatment differ, and this large multicentre UK trial found that treatment with a bandage and immediate discharge was as safe and effective as rigid immobilisation (using a wrist splint in 97% of cases and plaster cast in 3%) and routine follow-up regardless of the age of the child. No one needed surgery or fracture manipulation. The bandage group used more analgesia in the first 24 hours, but, overall, the rate of complications, pain, return to school, and self-reported function scores didn’t differ between the two groups at six weeks after the injury. These results reinforce a Cochrane review confirming that pain and recovery are equivalent regardless of treatment. In this study, 10% of younger children (4-7 year olds) and 6% of older ones (8-15 year olds) changed treatment in the first three days, mostly from bandage to rigid immobilisation and primarily because of pain. This may reflect the fact that parents and carers often regard a splint or cast as better than a bandage and clinicians may bow to, or share, that belief—despite this strong evidence to the contrary.

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Polypill: no panacea

A polypill for cardiovascular protection was first proposed over 20 years ago but still isn’t widely available. Critics say you lose flexibility in prescribing, whereas advocates say one pill is easier to swallow than a handful. This multicentre European trial of 2499 people who had survived a heart attack within the previous six months found that a daily polypill (100 mg aspirin: 2.5, 5, or 10 mg ramipril; and 20 or 40 mg atorvastatin) resulted in a significantly lower risk of further major cardiovascular events than usual care (8.2% vs 11.7%) over a two year period. The vast majority of people in the usual care group were prescribed the same three drugs, but adherence differed significantly (74.1% vs 63.2% at 2 years). Disappointingly, the polypill didn’t reduce the number of deaths from all causes; in fact, more people died of cancer in the polypill group; presumably because, if you’re protected from dying of a heart attack or stroke, you live long enough to develop cancer. The mean age of participants was 76 years, and over half were current or former smokers. The polypill may reduce secondary cardiovascular events and deaths, but it’s not a panacea.


The heart and HIV

The life expectancy of people living with HIV infection in high income countries has improved, though it is still around nine years less than HIV-negative people. Greater longevity is associated with a rising prevalence of HIV-associated cardiovascular disease. This systematic review of 45 studies including 5218 people living with HIV and 24,14 without, with a mean age of 49 years, found that advanced cardiovascular imaging identified signs of moderate to severe coronary disease in 0.52% of those with HIV and 0.27% of those without, and signs of myocardial fibrosis in 5.84% versus 0.68%. This study showed that most of the advanced cardiovascular imaging studies for HIV infection are done in men in North America and Europe, even though only 6% of people with HIV live there and in sub-Saharan Africa women are disproportionately affected. In addition, subpopulations of people living with HIV in high income countries have poorer cardiovascular health but are also more likely to smoke and have other traditional risk factors. It’s hard to know what to make of these results given the large degree of heterogeneity, the confounding effect of risk factors not associated with HIV, and the lack of data from low income countries with higher rates of endemic HIV infection.


Steps in the right direction

This population based, prospective cohort study using UK Biobank data for 78,900 individuals (mean age 61 years) found that more steps per day (up to about 10,000 steps) measured on a wrist accelerometer were associated with a lower risk of all-cause cancer and cardiovascular disease mortality and cancer and cardiovascular disease incidence over a seven year follow-up period. Higher step intensity measured by peak 30 cadence may yield further benefits. The fact that the benefit fell off over 10,000 steps was probably because of small sample size rather than anything magical about the 10,000 figure. It is fair to assume that the more steps, the better. The main problem with this study is the usual one for cohort studies; you really can’t claim that walking causes the lower risk. Furthermore, 97% of the study participants were white and represented only 5% of those invited to take part. But encouragingly walking is a public health no-brainer: low risk, cheap, and, at the very least, associated with good mental and physical wellbeing.


Incidentally

What do you do about adrenal incidentalomas (AIs)—the asymptomatic adrenal tumours that show
up in up to 5% of abdominal CT scans and whose incidence increases with age? This cross sectional study in China found that 1.4% of 25356 people who attended a routine annual check that included adrenal CT were found to have an adrenal tumour. There were no cases of malignancy or phaeocromocytoma, and most of the tumours were adrenocortical adenomas. Only 63% of those with adenomas had endocrine testing, but, of those who did, most had normal cortisol levels (72% irrespective of age). Among the functional adenomas, excess cortisol and aldosterone secretion were the main causes. In the UK, imaging, endocrine screening, and management by a multidisciplinary team are currently recommended when AIs over 1 cm diameter are identified. But patients can, meanwhile, be reassured that the chances are that their AI will prove to be purely incidental and harmless.

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