Tom Nolan’s research reviews—29 June 2023

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Tranexamic acid after major trauma

“It is hard to imagine that doctors or paramedics would withhold a treatment that saves lives in the short term because survivors may be severely disabled at six months,” say the authors of an editorial linked to new research. A randomised trial set in Australia recruited 1310 adults with major trauma who had a high risk of trauma induced coagulopathy according to the seven-point COAST score. Six months after prehospital treatment with tranexamic acid or placebo, there was no difference in survival with a favourable outcome (moderate to no disability) between the two arms of the trial (53.7% v 53.5% respectively). A secondary outcome of death at 28 days found a benefit from tranexamic acid: 17.3% versus 21.8%.

The linked editorial, quoted above, reminds us that “disability is not a constant characteristic of a person, but the result of an interaction between the person and the environment, and both change over time” and that severe disability doesn’t necessarily mean a poor quality of life—which may make a small, short term survival benefit worthwhile.


Aspirin and anaemia: a new chapter

Oh aspirin, what a life you’ve led. From your humble, willow bark beginnings to your glittering career as a big-pharma blockbuster drug, and then your existential search to find your place in the modern world. No wonder there are 23 books describing your life, and a search for you on Pubmed retrieves 73 000 results.

But time and tide wait for no drug: the 2018 ASPREE study enrolled 19 114 people aged 70 years or over in the United States and Australia and found that those randomised to receive aspirin had a higher risk of death after a median 4.7 year follow-up period than those randomised to receive placebo (12.7 v 11.1 events per 1000 person years). A post hoc analysis of the same study has now found that rates of anaemia were higher in the aspirin arm of the study and a decline in haemoglobin concentration of 4.2 g/L per five years in those taking aspirin versus 3.6 g/L per five years in the control group. I hear that aspirin has no plans to retire, but the authors of this study suggest considering periodic monitoring of haemoglobin among older people taking aspirin.

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Family treatment for childhood obesity

Many consultations make a lot more sense when you know your patient’s family—whether that’s from caring for them over many years or by seeking out a fellow GP who can recite the family’s dramas as if it were an Eastenders storyline. Although we so often see that patterns of behaviour can be understood well at a family level, family based interventions seem few and far between.

A randomised trial of 453 children who were overweight or obese recruited from primary paediatric care were offered family based treatment that used “behavioural techniques to develop healthy eating, physical activity, and parenting behaviours within families.” Although children in the intervention group had better weight outcomes between six and 24 months than those who received usual care, this didn’t reach the threshold for a clinically meaningful weight change. Considering a problem through a family lens may help to understand it, but solutions tend to be harder to come by.


Cardiovascular safety of testosterone gel

“Decreased frequency of shaving” are all the symptoms of hypogonadism you need—alongside two low fasting testosterone levels—for enrolment into a trial on the cardiovascular side effects of topical testosterone in older men. This industry-funded trial, for which the sponsor codesigned the research protocol, has reassuring conclusions about the cardiovascular safety of topical testosterone therapy in men with hypogonadism. The 5204 participants had a mean age of 63 years, and over half had cardiovascular disease (the rest had increased cardiovascular risk). No difference was found between those taking testosterone and those taking placebo in a composite outcome of cardiovascular events after a mean follow-up of 33 months. There was also no difference in incidence of prostate cancer—another safety concern with testosterone treatment—although those allocated to receive testosterone did have a slightly higher increase in PSA levels.


Continuous or intermittent antibiotics in critically ill patients

Prolonged infusions of β-lactam antibiotics rather than standard intermittent infusion received a weak recommendation from the Surviving Sepsis Campaign in 2021. The largest trial to date of continuous infusion versus intermittent administration of meropenem in critically ill patients has just been published. It found no survival benefit from continuous infusion, or any differences in any of the study’s secondary outcomes. However, the study recruited a high proportion of patients who had received prior antibiotics in intensive care (median five days in intensive care before enrolment), and only 10% had a confirmed bloodstream infection. We may need to wait for the much larger, and memorably titled, BLING III study to settle the question of whether continuous or...
intermittent antibiotics are more effective in this group of patients.


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