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Little protection from cerebral embolic protection

I recently found myself sieving milk to remove any creamy bits that might render a bowl of Rice Krispies inadequate, and I realised I'd long since lost my authority as a parent. In cardiac surgery, they use the same principle (sieving out unwanted bits, rather than submissive parenting) in cerebral embolic protection (CEP) devices, designed to collect the debris that gets chunked into the carotid and vertebral arteries during transcatheter aortic valve replacement (TAVR). Use of CEP is supposed to reduce the risk of periprocedural stroke, an often devastating complication in around 4% of these procedures. A US based registry found that, since CEP devices were commercially approved, around 13% of TAVR procedures have used them.

Unfortunately, the first randomised controlled trial of a CEP system has found no difference in the primary endpoint of a stroke within 72 hours or discharge from hospital between those randomised to having a TAVR with a CEP system and controls. Disabling stroke, one of the 15 secondary endpoints, did occur in fewer of the CEP patients, but the number needed to treat to prevent one disabling stroke was 125.

N Engl J Med doi:10.1056/NEJMoa2204961

Are doctors a risk factor for melanoma?

Is exposure to the sun or to a doctor more likely to lead to a diagnosis of melanoma? A provocative cross-sectional analysis of county-level data in the US suggests it might be the latter. This ecological study used proxies for sun exposure (such as temperature variability) and "diagnostic scrutiny" (median household income and physicians per 100 000 residents) and assessed their association with melanoma incidence in the non-Hispanic white population. It concludes that the "current pattern of melanoma incidence in the US is apparently less associated with UV radiation exposure, and more so with medical practice. Whether high diagnostic scrutiny provides any meaningful benefit in reducing melanoma mortality remains open to serious question."

The authors call on researchers interested in sun exposure to "focus on the feared outcome of the disease" rather than the diagnosis, and for clinicians and public health officials "not to exaggerate the magnitude of cancer risk factors, particularly for exposures as ubiquitous as the sun."

JAMA Intern Med doi:10.1001/jamaintern-med.2022.4342

Opioid-sparing postoperative protocols

Might introducing opioid-sparing postoperative analgesia protocols help to reduce long term opioid use? According to a study in the US, standard analgesia after knee or shoulder arthroscopy is 20-80 tablets of oxycodone, codeine, or hydromorphone to be taken on an as needed basis. Two hundred patients undergoing one of these procedures were randomised to either standard care or an opioid-sparing regimen of naproxen 500 mg twice daily, pantoprazole 40 mg once daily, and paracetamol 1 g four times daily. The latter group also had a rescue opioid to be taken only if the non-opioid analgesia wasn't effective, and were given an infographic about pain management strategies. Those allocated to the opioid-sparing group not only took fewer opioids (most took none at all) but also had better pain scores through the recovery period.

JAMA doi:10.1001/jama.2022.16844

Making things doubly complicated for UTI treatments

How do you define a complicated urinary tract infection (UTI)? Judging by the inclusion criteria of a randomised control trial of new antibiotic cefepime/enmetazobactam versus piperacillin/tazobactam to treat complicated UTI, the answer is, well, complicated. As well as debatable inclusion criteria, the study recruited mostly white (94%) and young patients, specified a seven day course of intravenous antibiotics, and had a not-very-applicable-in-real-life composite primary endpoint of complete resolution of symptoms and signs and microbiological eradication of the infection. Although cefepime/enmetazobactam came out as non-inferior to piperacillin/tazobactam, how these findings can be applied to practice seems unclear.

JAMA doi:10.1001/jama.2022.17034

SGLT too much?

Once sodium-glucose cotransporter-2 (SGLT2) inhibitors come off patent and get a bit cheaper, is this likely to affect their place in the pecking order for drug treatment of type 2 diabetes? A modelling study in the US, where care for people with diabetes accounts for around 1 in 4 healthcare dollars spent, estimates that the cost of SGLT2 inhibitors will need to drop by 70% for them to become cost effective as first line treatment. Useful to know if you're a generic manufacturer eyeing up this lucrative market.

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