

In brief



Reuters/Damir Sagolj

A doctor conducts a thyroid examination on 4-year-old Maria Sakamoto, brought by her mother to the office of Iwaki Radiation Citizen Centre, south of the tsunami-crippled Fukushima Daiichi nuclear power plant. The not-for-profit organisation offers free thyroid examinations for children from Fukushima. As the World Health Organization says children in Fukushima may have a higher risk of developing thyroid cancer after the Daiichi nuclear disaster 2 years ago, mothers in Fukushima worry that local health authorities are not doing enough.

From the CSIRO Preventative Health Flagship

Crohn's disease: towards improving postsurgical outcomes

Inflammatory bowel diseases (IBDs), namely Crohn's disease and ulcerative colitis, are debilitating life-long diseases characterised by recurrent cycles of active inflammation and remission. Depending on the severity of disease, IBD is treated with a range of therapies ranging from aminosalicylates and antibiotics through to immunomodulators such as thiopurines and antitumour necrosis factor (anti-TNF) therapy.

IBD is proposed to result from an immune response to gut microbes, often on a background of genetic predisposition. Broad examinations of gut microbial populations suggest that they differ radically between patients with IBD and healthy controls. Whether specific microbes are responsible for these diseases is unknown.

While 80% of patients with Crohn's disease will require bowel resection at some stage, surgery is rarely curative and around 70%

of patients who have surgery will require repeat surgery. An innovative clinical trial (the Post Operative Crohn's Endoscopic Recurrence, or POCER, study), conducted in 21 hospitals in Australia and New Zealand, has assessed the impact of clinical risk factors, a hierarchy of immune-suppressing drugs, and endoscopic disease monitoring on the recurrence of postoperative Crohn's disease. Preliminary results suggested that risk stratification helps predict endoscopic recurrence, that adalimumab anti-TNF therapy prevents recurrence more effectively than thiopurines in patients at high risk of recurrence (*Gastroenterology* 2012; 142 Suppl 1: S568), and that colonoscopic monitoring and drug therapy adjustment diminishes disease recurrence (*Gastroenterology* 2013; 144 Suppl 1: S164).

Metagenomic analysis, by the CSIRO Preventative Health Flagship and Murdoch Childrens Research



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Institute, performed on tissue from the surgical resection and from mucosal biopsy samples collected after resection revealed intriguing differences in the microbial populations at the time of surgery which were associated with endoscopic recurrence and remission 6 months later (*J Gastroenterol Hepatol* 2012; 27 Suppl 4: S99). Patients with and without recurrence at 6 months after surgery also had distinctly different bacterial populations.

The POCER study and parallel metagenomic study offer exciting prospects for improved postoperative management of this debilitating condition. The strategy for optimal clinical management after surgical resection is now clear — it is to reduce disease recurrence. The microbiological findings need confirmation, but may produce bacterial "signatures" that signify particular risks and may inform the development of new, bacteria-specific targeted therapies.

News

WHI confirms HRT dangers after 13 years

The landmark Women's Health Initiative (WHI) hormone replacement therapy (HRT) trial has released its 13-year follow-up results in *JAMA*, confirming that menopausal HRT has a complex profile of risks and benefits and cannot be recommended for chronic disease prevention. A total of 27 347 postmenopausal women aged 50 to 79 years from 40 US centres were enrolled in the study. Women with an intact uterus received either oestrogen plus progesterone or placebo. Women with previous hysterectomy received either oestrogen alone or placebo. Among women who took oestrogen plus progesterone the number of coronary heart disease (CHD) cases was 196 versus 159 in the placebo group, and the number of invasive breast cancer (IBC) cases was 206 versus 155 for placebo. Among those who took oestrogen alone there were fewer cases of CHD (204 v 222) and IBC (104 v 135) than in the placebo group. An accompanying editorial praised the WHI for "[overturning] medical dogma regarding the use of menopausal hormone therapy". "For that, women and all patients whose health depends on sound science are grateful."

JAMA 2013; 210: 1357-1368; doi: 10.1001/jama.2013.278040

JAMA 2013; 210: 1349-1350; doi: 10.1001/jama.2013.278042

Decision making declines with ageing

Even healthy older adults show profound declines in decision making and choice rationality as they age, says research in *Proceedings of the National Academy of Sciences*. A total of 135 healthy subjects from four age groups (adolescents, 12–17 years; young adults, 21–25 years; midlife adults, 30–50 years; older adults, 65–90 years) made 320 choices grouped in blocks of gain (160) and loss (160) trials. In gain trials, subjects chose between a certain gain of \$5 and a lottery that differed systematically in the amount of a possible monetary gain, and in either the probability of experiencing that gain (a risky lottery) or the ambiguity around that probability (an ambiguous lottery). Loss trials were identical to gain trials, except all amounts were negative. Older adults made decisions that resulted in the lowest monetary outcomes, 39% less than young adults and 37% less than midlife adults. "Our elders exhibited inconsistent choice patterns", the authors wrote. From a policy perspective, a "one-size-fits-all approach may be wrong for models that target broad populations", they concluded.

Proc Natl Acad Sci U S A 2013; 30 September (online); doi: 10.1073/pnas.1309909110

From the MJA archives

MJA 1965; 3 July (edited extract)

Smallpox: an anachronism

Sir: With reference to the correspondence (*Journal*, 24 April, 12 June, 1965) which has cropped up again on where to vaccinate, may I tell a little story? It is of a very young surgeon who had just passed his English fellowship and was still very conscious of his superior knowledge of anatomy. Having to proceed abroad, it became necessary for him to be vaccinated, and, like your correspondents, he applied himself to the problem of the best place to be "done". He

rejected the arms for fear of painfully enlarged axillary glands, which might incapacitate him. Similarly he rejected the legs, for fear his inguinal glands might become involved. So he brilliantly discovered what he thought was the ideal spot, the spot furthest from the four areas, the area which he conceived would have the minimum of lymphatic drainage. He was duly vaccinated on the umbilicus. A few days later he retired to bed with unusually severe involvement of both axillae and both groins.

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Planned vaginal delivery OK for twins

No significant difference has been found in the risk of fetal or neonatal death or serious neonatal morbidity between planned caesarean delivery (PCD) and planned vaginal delivery (PVD) groups in a randomised controlled trial involving 2804 women in 106 centres in 25 countries between 13 December 2003 and 4 April 2011. The study found that the rate of caesarean delivery was 90.7% in the PCD group and 43.8% in the PVD group. There was no significant difference in the composite primary outcome between the PCD group and the PVD group (2.2% and 1.9%, respectively). An editorial said the US rate of caesarean delivery for twins had jumped from 53.9% in 1995 to 75.0% in 2008. "The results of this study suggest that a plan to deliver appropriately selected sets of twins vaginally is a reasonably safe choice in skilled hands", the editorial stated. However, it was unlikely a major change in the use of caesareans would happen because of "the dramatic reduction in instrumented vaginal delivery (and the associated gradual disappearance of the skills necessary to perform these procedures)".

N Engl J Med 2013; 2 October (online);

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Pathways to violent behaviour during psychosis

Four subgroups of people with psychosis have been identified by research published in *JAMA Psychiatry*. Researchers from the UK National Evaluating the Development and Impact of Early Intervention Services in West Midlands Study assessed premorbid delinquency, age at illness onset, duration of untreated psychosis, past drug use, positive symptoms, and violent behaviour in 670 people with a first episode of psychosis (FEP). Subgroups identified were stable low, adolescent-onset high to moderate, stable moderate, and stable high. "Stable high premorbid delinquency from childhood onwards appears to directly increase the risk for violent behaviour, independent of psychosis-related risk factors", the authors concluded. "Treatments should directly address antisocial traits as a potent risk for violence during FEP."

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