

## Cognitive childhood clues to adult schizophrenia

Years before adults develop schizophrenia, there is a pattern of cognitive difficulties they experience as children, including problems with verbal reasoning, working memory, attention and processing speed.

Drawing on a long-term study of more than 1000 New Zealanders born from 1972 to 1973, a team led by researchers from Duke University, North Carolina, USA, has found a consistent pattern of developmental difficulties that first appeared when adult study subjects with schizophrenia were 7 years old (Reichenberg et al, 2010).

‘The proportion of kids who don’t score well on these tests is big, and the number of kids who develop schizophrenia is tiny,’ said study co-author Terrie E Moffitt, the Knut Schmidt Nielsen professor of psychology and neuroscience at Duke. But now that the study subjects are in their late 30s and mental illnesses have been identified, ‘we

looked backwards to understand more about how schizophrenia may develop.’

By the age of 32 years, 1% of the study participants met the formal criteria for schizophrenia and had been hospitalized and put on antipsychotic medication. Another 2.5% met the diagnostic criteria for the disorder, but had not received treatment.

Knowing what they know now, the researchers were able to track the progress of these cognitive deficits as the subjects went through testing at the ages of 3, 5, 7, 9, 11 and 13 years as part of the Dunedin Multidisciplinary Health and Development Study.

‘These kids are lagging behind to begin with and they continue to fall behind,’ said study co-author Richard Keefe, director of Duke’s Schizophrenia Research Group. Their verbal skills are initially poor, and then they develop other problems along the way, including difficulties with

memory and verbal processing, key factors in learning.

For each year between the ages of 7 and 13, the children who later received a diagnosis of schizophrenia lost between 0.17 and 0.26 years in mental age when compared with the other children.

Adults with schizophrenia have been known to lag about 8 points behind the average person in IQ tests, but this study helps to clarify where and how they might differ.

The findings suggest that adult psychosis does not just emerge fully-formed, it probably comes from a developmental process. ‘What we think of as adult psychiatric disorders have their roots much earlier in life,’ said co-author Avshalom Caspi, the Edward M. Arnett Professor of psychology and neuroscience at Duke.

Reichenberg A, Caspi A, Harrington H et al (2010) Static and dynamic cognitive deficits in childhood preceding adult schizophrenia: a 30-year study. *Am J Psychiatry* Jan 4 [Epub ahead of print]

## Which drug-eluting stent?

The COMPARE trial evaluated the safety and efficacy of the second-generation everolimus-eluting and paclitaxel-eluting stents. It randomized 1800 consecutive patients (aged 18 to 85 years) undergoing percutaneous coronary intervention to blinded treatment with everolimus-eluting or paclitaxel-eluting stents.

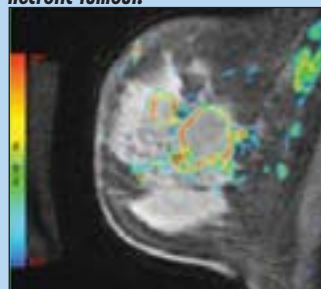
The primary endpoint occurred in 56 (6%) of 897 patients in the everolimus group *vs* 82 (9%) of 903 in the paclitaxel group, indicating that the everolimus-eluting stent is better than the paclitaxel-eluting stent in unselected patients.

Kedhi E, Joesoef KS, McFadden E, Wassing J, van Mieghem C, Goedhart D, Smits PC (2010) Second-generation everolimus-eluting and paclitaxel-eluting stents in real-life practice (COMPARE): a randomised trial. *Lancet* 375(9710): 201–9

## Use of MRI does not reduce re-operation rate for breast cancer

The addition of magnetic resonance imaging (MRI) to the initial, preoperative assessment of women with small breast cancers does not reduce the re-operation rate for incompletely

**Post-processed dynamically acquired two-dimensional T1W-VIBRANT images, with overlaid colour encoding representing cystically necrotic tumour.**



excised tumour, suggests research published by the National Institute for Health Research Health Technology Assessment programme.

The number of women having a repeat operation or mastectomy, following initial lumpectomy, for incompletely excised breast cancer rose from 14% to 17% in 2006/7. The NHS is considering whether to recommend the addition of MRI to mammography for the assessment of breast cancer. However, there is limited evidence about its effectiveness.

Professor Lindsay Turnbull of the University of Hull and her team assessed whether the addition of MRI to the current

method of patient evaluation by triple assessment (clinical examination, imaging (mammography and ultrasound) and biopsy) would aid breast tumour localization and reduce the re-operation rate in women with primary tumours.

The trial randomized 816 women to receive MRI and 807 to receive no MRI, and found no differences in the re-operation rate: 18.75% for the MRI patients and 19.33% for the ‘no’ MRI group. Adding MRI to the triple assessment would cost more but offers few or no benefits in terms of clinical outcome or quality of life.

‘These results are important from both from the patient’s

perspective and a health economic aspect,’ said Professor Turnbull. ‘Although MRI provided the best assessment of the extent and location of tumour present in the breast, this information could not be utilised by surgeons using currently accepted techniques to reduce the re-operation rate, and therefore did not benefit patients.’

Turnbull LW, Brown SR, Olivier C et al on behalf of the COMICE Trial Group (2010) Multicentre randomised controlled trial examining the cost-effectiveness of contrast-enhanced high field magnetic resonance imaging in women with primary breast cancer scheduled for wide local excision (COMICE). *Health Technol Assess* 14(1): 1–182

## Obstructive sleep apnoea may worsen diabetes

Obstructive sleep apnoea adversely affects glucose control in patients with type 2 diabetes, according to a small study conducted by researchers at the University of Chicago (Aronsohn et al, 2009).

The study 'demonstrates... that there is a clear, graded, inverse relationship between obstructive sleep apnoea severity and glucose control in patients with type 2 diabetes,' wrote Dr Renee S Aronsohn, instructor of medicine at the University of Chicago.

Dr Aronsohn and colleagues consecutively recruited patients with type 2 diabetes from outpatient clinics. The participants were interviewed to assess their diabetes history, medical history and medications, and level of physical activity, and their sleep/wake

cycles were monitored for 5 days using wrist actigraphy and self-reported sleep logs. Finally, they underwent an overnight polysomnography test for obstructive sleep apnoea, and glucose control was assessed by measuring glycosylated haemoglobin levels.

In total, 60 patients were included in the final analysis. More than three-quarters (77%) had obstructive sleep apnoea (38% (23) mild, 25% (15) moderate and 13% (8) severe), but only five had been previously evaluated for the disease.

More severe obstructive sleep apnoea was associated with poorer glucose control, implying a role of more severe diabetes with potentially more complications. Relative to patients without obstructive sleep

apnoea, the presence of mild, moderate or severe obstructive sleep apnoea significantly increased mean adjusted glycosylated haemoglobin values by 1.49%, 1.93% and 3.69% respectively. These are comparable to the effects of widely used hypoglycaemic medications, meaning that having obstructive sleep apnoea may negate the beneficial effects of anti-diabetic drugs.

'Effective treatment of obstructive sleep apnoea may represent a novel and non-pharmacologic intervention in the management of type 2 diabetes,' said Dr Aronsohn.

Aronsohn RS, Whitmore H, Van Cauter E, Tasali E (2009) Impact of untreated obstructive sleep apnea on glucose control in type 2 diabetes. *Am J Respir Crit Care Med* December 17 [Epub ahead of print]

## Chlorhexidine preoperative cleansing reduces surgical site infections

A study published in the *New England Journal of Medicine* shows that there were 41% fewer infections in surgical patients cleansed with 2% chlorhexidine gluconate and 70% alcohol than those cleansed with povidone-iodine, with significant reductions in both superficial (52%,  $P=0.008$ ) and deep incisional infections (67%,  $P=0.05$ ).

## Combined drug and radiotherapy improves survival in cervical cancer

Combining drugs and radiotherapy improves the survival chances of women receiving treatment for cervical cancer, concluded a Cochrane review of the effects of combined drug and radiotherapy in cervical cancer treatment to date.

## Improving clinical response in psoriasis

A phase III study of the treatment of moderate to severe plaque psoriasis showed a significantly higher clinical response of ustekinumab (45 mg or 90 mg) over a 12-week period compared to etanercept (50 mg twice-weekly). The study of 903 patients was published in the *New England Journal of Medicine*.

## Ensuring consistency of care and improved quality of sexually transmitted infection service provision

The sexual health community has embraced the challenge of ensuring consistency of care for users of sexually transmitted infection services, following the launch of new standards 'Standards for the management of sexually transmitted infections (STIs)'.

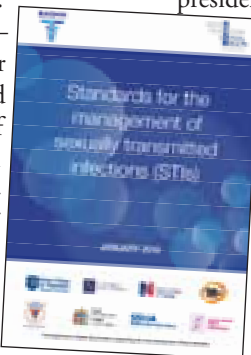
The new standards were produced by the Medical Foundation for AIDS & Sexual Health and the British Association for Sexual Health and HIV (BASHH).

The standards – which are a guide for all providers and commissioners of sexually transmitted infection services – cover all aspects of sexually transmitted infection management, from diagnosis and treatment to

the wider public health role of infection control.

There is also a separate publication for people who use sexually transmitted infections services, explaining the quality of care that they are entitled to expect, such as being offered an appointment within 48 hours, and 'open access' to services (meaning you can use the service without needing to see your GP first).

Dr Immy Ahmed, former president of BASHH and



Project Clinical Lead for the standards said: 'Through increased investment and innovations, significant achievements in sexually transmitted infection services have been realized in recent years. These

new standards represent a consolidation of best practice and the challenge now is for commissioners and sexually transmitted infection providers to focus all our efforts on working together and implementing these standards effectively.'

The standards have been drawn up to facilitate the commissioning of services within a clinical network framework to enable and support specialists and health-care professionals in the community and primary care setting to work together.

The standards are also recommended for use in services not commissioned by the NHS, and their clinical recommendations apply to Wales and Northern Ireland. Sexual health service standards for Scotland were published by NHS Quality Improvement Scotland in 2008.