Specialist updates

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Cardiology

Psychiatrist fights for cardiometabolic health of schizophrenia patients

CLIFFORD FRAM

A Sydney psychiatrist is leading a bold interdisciplinary study aimed at saving people with schizophrenia from cardiometabolic disease.

Schizophrenia is a double whammy. The journal Nature describes it as the worst disease affecting mankind. And in Australia patients become ill and die 30 years younger than the general population.

This troubles Dr Tim Lambert, a Sydney Medical School Professor of Psychiatry and a research leader at the Charles Perkins Centre, which is a multidisciplinary University of Sydney project set up to tackle obesity, diabetes and cardiovascular disease.

Neglect is a part of the problem, Dr Lambert says. “Psychiatrists don’t feel it’s their job to look after physical health, although it is. And many specialists won’t touch mentally ill patients.”

Medical understanding is another issue. Dr Lambert is running a clinical research project aimed at developing a model of care and defining biomarkers that can be used to help people in their 20s, when they are young enough to benefit.

“The rate of cardiovascular disease is increasing among people with schizophrenia. There is also a high prevalence of diabetes and subclinical abnormalities of glucose metabolism such as impaired glucose tolerance. It is possible this association is part of the pathophysiology of schizophrenia.

“We are blending the research and the clinical service together. We are crossing over boundaries that have never been crossed before.”

The heart of Dr Lambert’s research is a clinic at Concord Hospital, where patients are seen by six clinical streams in one day. These include sleep specialists, because 60% have sleep apnoea. Apart from anything else, this a risk factor for worsening their psychosis.

There is a multidisciplinary discussion for each patient, who goes away with a summary of what has been found. This is also communicated to the people involved in their long-term care.

The data collected is fed back into a central database for analysis by researchers at Charles Perkins.

“We are looking at the standard risk factors. The lipid profile particularly. People with schizophrenia have a bizarre lipid profile. I have got to a stage where I can almost diagnose people on their lipid profile alone.

“The profile explains a lot of the death linked to arteriosclerotic vascular disease. Even if we treat patients with statins, they have high triglycerides and very low HDL.”

But Dr Lambert’s main concern is that doctors are not using the knowledge they already have.

“There is no rocket science here. Everyone deserves the same life expectancy. Just because you have an illness that frightens people does not mean you should get lower quality service.”

What do you think?

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Experts call for overhaul to blood pressure treatment

HUGO WILCKEN

Clinical decisions on blood pressure treatment should be informed by overall cardiovascular risk and not blood pressure alone, say the authors of a **new study**.

Their work shows a risk-based approach could change the way patients are treated. Some with "normal" blood pressure could need medication. And others with slightly raised levels and no other cardiovascular risk factors could benefit most from only lifestyle interventions.

A change could do for blood pressure what clinicians did for cholesterol a decade ago when they shifted to a risk-based approach, says author Professor Bruce Neal of the George Institute and the University of Sydney.

Published in The Lancet, the analysis stratifies outcomes of blood pressure treatment according to cardiovascular risk in a number of trials involving over 50,000 patients.

"The blood pressure field has lagged far behind because we haven't had this type of evidence until now," says Prof Neal, whose team collaborated with researchers from Sweden’s Uppsala University Hospital .

A risk-based approach is likely to be more cost-effective, cutting the number of patients needing treatment and allowing better control of drug costs, they say.

Risk-based treatment is a “win for the patients and should be a win for the government’s budget too,” says Prof Neal.

This runs counter to the recommendations of current guidelines, in Australia and elsewhere, which focus on blood pressure levels, taking no account of other risk factors.

Groups in the study were stratified using an algorithm with variables for sex, BMI, systolic and diastolic blood pressures, other antihypertensive treatment, current smoking, diabetes and history of heart disease.

The Lancet 2014; online

What do you think?

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Doctors lack knowledge about end-of-life laws

RACHEL WORSLEY

Specialists appear unable to make competent end-of-life decisions involving the withholding and withdrawing of medical treatment, according a study published in the MJA.

The study led by Ben White from the Queensland University of Technology shows a mean score of 3.26 out of seven in a knowledge test about the validity of an advance care directive (ACD) and the authority of substitute decision-makers.

Close to 900 specialists in emergency medicine, geriatric medicine, intensive care, medical oncology, palliative medicine, renal medicine and respiratory medicine took part and few were able to determine whether an ACD presented to them was valid.

Even if it was valid, the doctors were uncertain about whether they should follow a directive to refuse treatment in a situation when treatment was "clinically indicated". They also lacked knowledge in determining the legally authorised decision maker for medical treatment.

Failure to understand could lead to unlawful withdrawal or withholding of medical treatment, a prospect that opens doctors up to "criminal responsibility" for murder, manslaughter or assault, as well as civil liability, according to the authors.

"A lack of legal knowledge will not excuse a medical professional from liability," the researchers write.

Doctors from NSW did best in the test and geriatric and palliative medicine practitioners scored better marks than those working in medical oncology and respiratory medicine.

The authors write there is a need for improved medical school training, a shift in doctor's attitudes to knowing the law and a "harmonised national approach" to legal reform.

A medico-legal adviser at MDA National Insurance, Dr Sara Bird, says end-of-life law is complex and varies from state to state.

In NSW, there is no legislation directed at ACDs. Instead, NSW health guidelines set out the main principles of ACDs that all doctors are legally bound to follow.

The most recent discussion about ACD law reform is a 2011 government paper, "A National Framework for Advance Care Directives", which recommends a national framework of legislation including nationally agreed terminology, personal values and life goals, specific medical interventions and the appointment of a substitute decision-maker.

Dr Bird says medical practitioners who are unsure about their legal rights should seek advice from their medical defence organisation.

"If there is a disagreement between the treating team and the patient or their substitute decision maker about end of life care, there are a number of strategies that can be followed, including trying to build consensus over time, seeking second opinions and applying to the Guardianship Tribunal or other courts."

What do you think?

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Thioredoxin-interacting protein seen as drug target

CLIFFORD FRAM

Pharmacological suppression of thioredoxin-interacting protein (TXNIP) may improve outcomes in many cardiovascular disease states and in diabetes, according to a **paper** published by Australian researchers.

It is likely that targeting TXNIP may rescue pancreatic beta-cells or cardiomyocytes from apoptosis in the presence of diabetes, much like ACE-inhibitors for early renal dysfunction, they say.

TXNIP is synthesized in response to increased blood sugar levels and abnormal wall stresses in blood vessels, and is implicated in many of the complications of ischaemic heart disease and diabetes, largely by amplifying inflammatory reactions, says lead researcher Professor John Horowitz of Adelaide's Basil Hetzel Institute.

He and his colleagues have found that it is suppresses nitric oxide and that it accumulates in aortic valves, potentially contributing to the process of aortic stenosis, according to their paper published in the journal Cardiovascular Drugs and Therapy.

All hypoglycaemics suppress TXNIP, as do ACE-inhibitors and the calcium channel antagonists verapamil and diltiazem.

While there are no currently used therapeutic agents specifically designed to interact only with TXNIP expression, it is increasingly clear that many of the beneficial effects of such agents are TXNIP-modulated, says lead author Cher-Rin Chong.

The researchers believe their work is important because "not only does TXNIP amplify inflammatory activation and apoptosis pathways, it also exerts negative effects during abnormal blood flows and tissue oxygenation/reperfusion, particularly in the presence of diabetes".

Australian researchers have found that it potentially contributes to aortic stenosis.

Their next step is to assess whether or not TXNIP suppression is critical to the salutary cardiovascular effects of these agents.

"It would be ideal to design a therapeutic agent that modulates TXNIP expression specifically, and ascertain its impact on clinical events," says Chong.

Cardiovascular Drugs and Therapy, 2014 online

What do you think?

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