

# Medicine for Old Age Psychiatrists: a Refresher and Update

The third annual Medicine for Old Age Psychiatrists conference was held at the Royal Society of Medicine, London, on the 29th–30th October, 2007. It was a comprehensive meeting covering a wide range of topics, including cardiology and urology. This report reviews the key talks.

Dawn Powell

## Welcome

"This is the third annual *Medicine for Old Age Psychiatrists* conference. I came up with the concept for this meeting because I felt old age psychiatrists needed a way of keeping up to date with the latest developments in medicine, and I thought it would be a good way of refreshing their memory about what they were taught at medical school!" Programme planner Dr Rajen Shah, a Consultant Old Age Psychiatrist from Springfield University Hospital in London, told delegates in his welcome address. He added: "As in previous years, we have a packed programme for you and some really excellent speakers. I hope you will find it informative and interesting."

## Neuroradiology

"The real watershed event in neuroradiology was the advent of computed tomography (CT) scans in the 1970s." Dr Phil Rich, Consultant Neuroradiologist at St Georges Hospital in London, told delegates attending his talk *Neuroradiology* at the *Medicine for Old Age Psychiatrists* meeting. "Before this, it was not possible to image the brain without doing horrible things to patients (eg, injecting dye into ventricles) or without involving risk." Although a seminal development, the first CT scan was very basic compared with modern scans. "It took several minutes to take each slice of the brain and about 12 slices would be taken. The data was then sent away for processing and a sheet of paper with lots of little numbers on it would come back two or three days later. From these numbers, a greyscale image was created. Thankfully, CT scans can now produce high-definition 3D images."

Following CT scanning, the next step forward was magnetic resonance imaging (MRI). "CT scanning is basically just a density map, but MRI can do lots of things because you are measuring more diameters. It has a higher soft-tissue resolution, so it shows the brain in more detail than a CT scan." But, Dr Rich said there are problems with MRI: people with pacemakers et cetera cannot use it because of its magnetic field (10,000 times stronger than the earth's magnetic field), people with

claustrophobia find it difficult, and MRI scans are not as widely available as CT scans.

With the development of CT and MRI scans, structural imaging has reached a stage at which it is possible to see the brain in the same detail as you do in a postmortem examination. "This is useful if you are dealing with conditions that affect the gross condition of the brain, such as different types of dementia."

Dr Rich explained that different dementias present with different atrophies in the brain. But, he added there is sometimes overlap between the dementias—for example, studies have shown that it is difficult to distinguish between patients with pure vascular dementia and those who have vascular dementia and co-existing Alzheimer's disease. There can also be overlap between normal age-related atrophy and dementia-related atrophy, particularly in the early stages of dementia. "Dementia causes people to lose volume [ie, atrophy] more quickly than normal ageing. But, there is a wide normal range in the elderly. How do we measure what is too much atrophy? There are not any reliable measures with standard CT or MRI scanning."

Studies have looked at different strategies for overcoming this problem. "Ohnishi et al used MRI voxel based morphometry [a software programme that compares different brain scans]. They found that patients with Alzheimer's disease had the same age-related atrophy as the control group but also had additional atrophy in other areas. The pattern of cerebral atrophy in this disease is not advanced normal ageing; it is something different. This is very useful to know for clinical practice."

Another method is to use a brain bank, consisting of hundreds or thousands of normals. "You superimpose the scan image on 3D cortical maps from the brain bank, and you may be able to make a preclinical diagnosis from one scan. The only problem is that you have to ensure a very accurate and very representative brain bank."

Importantly, Dr Rich continued, linear (ie, one) measurement should be treated with caution because there are a lot of variables. "Linear measurements are technique/patient dependent, observer variation is likely to increase with wider use, and they oversimplify radiological analysis of a complex structure. I use the visual rating scale [score each temporal lobe on a degree of

atrophy]. **It's very easy in practice and easily applied.**"

Concluding his talk, Dr Rich said there were many exciting new imaging techniques on the horizon.

## Atherosclerosis and heart failure

**"Atherosclerosis is a dynamic process that happens to all of us all of the time. It is not if but when."** Dr Hugh McIntyre, Honorary Consultant Cardiologist at the Royal Brompton Hospital in London, told delegates attending the first of two cardiology talks he gave at the conference. He explained that atherosclerosis is a natural part of ageing, **"Coronary artery disease increases with age: 60% of fatal myocardial infarctions are in people aged 75 years or older and autopsy studies have shown that 70% of people aged 90 years or older have at least one occluded coronary artery."**

Medical opinion on the atherosclerosis model, according to Dr McIntyre, has changed in the last 20 years. **"We used to think that plaque built up in the artery gradually over several years, eventually causing it to become occluded. But about 20 years ago, it was discovered that plaque builds up on the outside of the artery. This plaque could rupture and you could get a sudden blocking of the artery. If you are lucky, it will be temporary. But if you are unlucky, you get platelets coming in followed by thrombus—leading to an occlusion and a myocardial infarction. The vulnerability is not the stenosis [ie, the narrowing of the artery] but the plaque activity."**

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Atherosclerosis can lead to angina, which Dr McIntyre described as **"myocardial ischaemia arising from a mismatch between increased myocardial oxygen need and supply."** He added that drug therapies for angina concentrated on either lessening need or increasing supply. **"Vasodilators (eg, calcium channel blockers) are used to improve flow while  $\beta$ -blockers are used to reduce metabolic demand. But these only relieve symptoms rather than improving prognosis."** There has been little development in this field over the last few years. One exception is ivabradine, which slows down the heart rate (and therefore decreases metabolic demand) by acting on the sinoatrial node. **"It's like a  $\beta$ -blocker without the side effects."**

Interventional therapies are also mainly used for the relief of symptoms. **"Bypass grafting, unless you have triple vessel disease, is not going to make you live any longer. More than 90% of bypass operations are done purely for symptomatic relief."** Dr McIntyre added that bypass grafting had become less popular in recent years as cardiologists had become **"very enamoured"** with angioplasty. He explained that originally, angioplasty involved

the occluded artery being opened with a balloon. **"There were some complications with this procedure, such as a 40% restenosis [the artery becoming blocked again] rate. Stenting, using scaffolding to keep the artery open, was then introduced. The microengineering of stents is magnificent—they have reduced the restenosis rate to 10%. They are very good, but again there is no real survival benefit with them."**

In Dr McIntyre's second talk at the meeting, he focused on heart failure and the elderly patient. **"Sir Thomas Lewis [a pioneering cardiologist in the early 20th century] gave the fantastic definition that heart failure is the inability of the heart to accomplish its work to a greater or lesser degree."**

Heart failure is a common condition that affects the 5% (1.5% symptomatic systolic dysfunction, 1.5% asymptomatic systolic dysfunction, and 2% diastolic dysfunction) of the UK's general population and this rises to 10% among the 80 and over population. It is responsible for 5% of acute hospital admissions, 10% of bed occupancy, and approximately 2% of the total health budget. It can severely affect quality of life. **"Between cancer and heart failure, which one would you prefer to have? The answer is cancer. Not only does heart failure kill you, it makes you feel rough while it waits to kill you."**

Dr McIntyre then reviewed treatment advances in the management of systolic dysfunction. **"Until the 1950s, tubes were put under the skin to drain the subcutaneous oedema. Patients were advised to rest and avoid emotion. Diuretics have been used to treat oedema since the 16th century, but the modern diuretics were developed after the 1930s when the side-effects of antibacterial drugs were noted, which included increased urine output"**

Although diuretics relieve symptoms, they do not prolong life. angiotensin-converting enzyme (ACE) inhibitors, however, do improve survival. They work by switching off the renin-angiotensin system, which improves symptoms and reduces heart size. **"The reason I enjoy looking after heart failure is because I can give a patient diuretics and ACE inhibitors, and they come back better."** There has also been a dramatic conversion to  $\beta$ -blockers in recent years. **"They used to be contraindicated for heart failure, but now  $\beta$ -blockers are fundamental. I cannot emphasize enough that the combination of a  $\beta$ -blocker and an ACE inhibitor can be phenomenal. You have to be careful (you need to start low and go slow), but it is associated with a 35% reduction in death after 21 months."**

Diastolic dysfunction, a disease of older people (particularly women), is more difficult to treat because there is a paucity of trial evidence. **"There is very little information about this population. But, we do have new evidence that  $\beta$ -blockers and possibly ACE inhibitors may be right for this group."**

Low blood pressure and renal impairment is common in all heart failure patients, but neither should prompt alteration in medication without another reason (eg, if blood pressure has suddenly dropped). **"If the blood pressure is low, don't panic and stop others panicking."**

Concluding his talk, Dr McIntyre said: “Systolic heart failure affects younger men and diastolic heart failure affects older women. Patients may have complex medication regimens, which need ongoing clinical supervision.”

## Assessment of urinary incontinence and the older person

“Urinary incontinence is more common than other diseases associated with age, such as Parkinson’s disease. It is more prevalent and severe with age for both genders, but particularly women. So what should we do about it? If old age psychiatrists are like geriatricians, they ignore it.” Dr Adrian Wagg, Senior Lecturer and Consultant Geriatrician at University College London, told the delegates attending his talk on urinary incontinence.

He explained that both doctors and patients sometimes perceived urinary incontinence as a condition of ageing. “Urinary incontinence has an affect on quality of life, but older patients do not report this as much as younger patients. I suspect this is because older people get used to being wet and deal with it—they see it as part of getting older. Unfortunately, a lot of healthcare professionals have the same attitude, but it shouldn’t be a normal consequence of ageing.”

If a patient presents with urinary incontinence, it is important to get a basic bladder history (eg, frequency of micturition, presence of urinary urgency, and the presence of urgency incontinence). “Other things to consider are if there is urine loss on coughing or change in position, presence of poor or intermittent stream, and bowel function. Urinary incontinence is a taboo, but faecal incontinence is even more of a taboo.”

It is also important to look at the patient’s fluid intake. “Some patients will restrict their fluid intake, which isn’t good if they have overactive bladder as it makes their urine concentrated and irritable to the bladder; it can also give them orthostatic hypotension. But you can normalise their intake. It is fashionable at the moment to drink mineral water all the time. That’s rubbish—buy moisturiser if you want to hydrate your skin. You only need 4.5 litres of fluid a day, which includes the fluid you get through food.”

Pharmacological therapy is potential cause of urinary incontinence. The 1998 General Household survey found that 22% of 65-74 year olds are on four or more drugs, and this rose to 31% in the 75 plus group. “It is probably imperative that you do a medicine review to see if there is any incriminating compounds that can lead to incontinence. There are a fair few that can: diuretics, calcium channel blockers, anticholinergics et cetera.” Dr Wagg added there are also several medical and environmental conditions that can cause problems. “Functional impairment, cognitive impairment, impairment of compensatory mechanisms (frequent loo trips can be a big problem if you are old and have mobility problems) are all linked with urinary incontinence. So

are recurrent infections, constipation and arthritis.”

Overactive bladder, a cause of incontinence, is clinically defined as: urinary frequency (more than 8 voids a day), and urinary urgency with or without urge incontinence. In terms of treating it, medication is sometimes necessary. “It is more likely that an older person will need pharmacological therapy than a younger patient. Older patients do not seem to be so adaptable to lifestyle measures.”

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However, there are some concerns that therapies for urinary incontinence are linked with an increased risk of cognitive impairment. “We already know that drugs with antimuscarinic properties can lead to cognitive impairment in community dwelling patients. Conditions that increase the risk include: Alzheimer’s disease and related dementias, Parkinson’s disease, type 2 diabetes and multiple sclerosis.”

Not all drugs, though, are associated with this risk. “Whereas oxybutynin has a negative affect on cognition, solifenacin does not affect learning in rats, darifenacin does not adversely affect cognition, tolterodine appears to have no affect on cognition, and trospium does not affect driving ability in older adults. So there is probably more to it than selectivity or crossing the blood-brain barrier.” In clinical practice, treatment rarely adversely affects cognition. It’s only in patients who are already known to have impaired cognition.

Dr Wagg also reviewed management options for stress incontinence (loss of urine on coughing or laughing). “The National Institute for Health and Clinical Excellence recommend patients undergo at least three months’ pelvic floor muscle training and then surgical options (mid urethral tapes, injectables, colposuspension).” But, irrespective of the type of continence, catheters and pads are a last resort. “They should only be used after a full assessment and when there is no alternative. Use catheters if pad changing causes a high amount of distress and discomfort.”

Summarising his talk, Dr Wagg said: “We must take into account the impact of the disease and other associated diseases, the impact of treatment and the effect of overactive bladder medication. We must treat the whole person and not exclude people on the basis of perceived frailty.”

## Talks round-up

### Monday 29th October

Dr Stuart Bruce, a Consultant Physician at the Conquest Hospital in East Sussex, gave a talk on gastroenterological conditions and the elderly patient. He focused on peptic ulcer disease, irritable bowel syndrome, artificial nutrition and hydration in dementia patients, and clostridium difficile (*C. difficile*). Dr Phil Rich, a Consultant Neuroradiologist at St George's Hospital in London, was the next speaker (see report).

Dr Mike Stone, Director of Bone Research at Cardiff University Academic Centre, began the afternoon session with a talk on osteoporosis. He said there were more than 200,000 osteoporotic fractures each year in UK at a cost of 1.7 billion. **"1 in 2 women and 1 in 5 men over the age of 50 will have an osteoporotic fracture in their lifetime. The risk of fracture increases exponentially with age, and hip fractures account for at least 20% of orthopaedic bed occupancy (800,000 bed days)."** With regard to management, there are a range of treatment options available. **"Calcium and vitamin D have been proven to be effective for the frail elderly. New bisphosphonates, for example, alendronate, are still first line treatments and once-monthly ibandronate or intravenous zoledronate are good alternatives to alendronate. Teriparatide looks good but is too expensive, and strontium ranelate looks interesting."**

He added that a updated National Institute for Health and Clinical Excellence technological appraisal on osteoporosis treatment was imminent [it was announced in December that the appraisal has gone back to review following a successful appeal by interested parties].

Dr Antony Johansen, a Consultant in Trauma and Rehabilitation at University Hospital of Wales, Cardiff, spoke on a similar theme to Dr Stone—orthogeriatrics. He said: "Hip fracture is devastating. Up to 10% of people will be dead within a month of suffering a hip fracture, and half of those who survived fail to regain former independence." Quality-of-life data shows that 80% of over 75 year old women would prefer to die than lose their independence as a result of a bad hip fracture that requires them to go into a nursing home.

Dr Hugh McIntyre, Honorary Consultant Cardiologist at the Brompton Hospital in London, was the last presenter of the day and was also the first speaker of the secondary day of the meeting (see report).

### Tuesday 30th October

Professor Stephen Jackson, Professor of Clinical Gerontology at Kings College London, was Tuesday's second speaker. In his talk, *The most significant drug advances of the last 10 years*, he reviewed the prescribing problems associated with elderly patients. **"There should be more use of the benefits of modern therapy, evidence based prophylaxis, greater confidence in treatment, and more patient involvement. But there should be less adverse drug**

**reactions, polypharmacy, and ageism."**

In the afternoon, Dr Danielle Harari (a Consultant Physician at St Thomas' Hospital in London) spoke about constipation in the elderly patient. She said: **"Patients feel 'not right' in themselves when they are constipated, but they may get a dismissive attitude from doctors. Although they are keen to find a solution, they find that useful and empathic advice and information is lacking. Therefore, there is a strong imperative for them to self-manage—including using laxatives."** She added that constipation did not necessarily mean fewer bowel movements. **"50% of those reporting with constipation have a daily bowel movement. The primary problem is difficult evacuation with symptoms of straining and hard stool."** Dr Adrian Wagg, a Consultant Geriatrician from University College Hospital in London then gave a talk on urinary incontinence (see report).

Dr Chris Dyer, a Consultant Geriatrician from the Royal United Hospital in Bath, talked about respiratory disease. He said there were factors that complicated diagnosis. **"Symptoms are often non-specific, the signs are less often contributory, and there can be co-morbidities. And the patient could have cognitive impairment or anxiety and depression."** He concluded his talk by saying that respiratory diseases were very common in older adults, and chronic obstructive pulmonary disease could be treated even in those with significant cognitive impairment.

Finally, Dr Jonathan Trembl, a Consultant Geriatrician from University Hospital in Birmingham, concluded the conference with a talk on bed rails. **"The National Patient Safety Agency say that patients who are well enough should make their own decisions about bedrails and bedrails must not be used as restraints."**

### Box 1: Meeting exhibitors

- GE Healthcare  
Parkinson's disease—DaTSCAN™  
[www.datscan.com](http://www.datscan.com)
- Medpress—GM & GM2  
[www.gerimed.co.uk](http://www.gerimed.co.uk)
- Novartis Pharmaceuticals UK Ltd  
Alzheimer's disease—Exelon™  
Medical Information: 01276 698370
- Servier Laboratories Ltd  
Medical Information: 01753 666409
- Shire Pharmaceuticals Ltd  
Alzheimer's disease—Reminyl XL™  
Medical Information: 01256 894000
- The next Medicine for Old Age Psychiatrists meeting will be on 27th—28th October, 2008, at The Institute of Physics. For further information, visit: [www.oldagepsychiatry.co.uk](http://www.oldagepsychiatry.co.uk)