For clinicians who deal with psychogeriatric patients, the work sometimes takes on an unfortunate personal relevance. Such was the case with Dr. Dolly Dastoor, whose mother suffered from dementia in the later years of her life. “In a way it was good that I had a bit of knowledge to help with my situation”, recalls Dr. Dastoor, “and I learned first-hand how difficult it is for families to be able to cope. I think that has given me more insight and empathy to work with these types of patients and their families”.

Dr. Dastoor’s career began in the early 1960s at the University of Bombay, where she completed her Bachelor and Masters Degrees in psychology. While her original plan was to continue on with her Ph.D., marriage and family commitments led her to Nigeria, where she obtained a position as a research fellow at the University of Ibadan in 1966. There, she took part in the World Health Organization International Pilot Project on Schizophrenia, an early effort to standardize the language of the disorder for professionals involved in classification, diagnosis, and treatment efforts. She also took part in a local research project exploring the effectiveness of community-based psychiatric services, as provided in a Nigerian village, relative to those available in more traditional hospital-based settings. Service delivery and assessment were areas of investigation that Dr. Dastoor continued when she moved to Canada in 1973. This was the beginning of her career at the Douglas Hospital, where she was hired as assistant professor, department of psychiatry, McGill University, and member of the McGill Centre for Studies in Aging.

A PERSON-CENTRED APPROACH TO DEMENTIA
An interview with Dr. Dolly Dastoor, Clinical-Administrative Chief, Program in Dementia with Psychiatric Co-Morbidity, Clinical Psychologist, Division of Gerontopsychiatry, Douglas Hospital, Assistant Professor, Department of Psychiatry, McGill University, and member of the McGill Centre for Studies in Aging

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IN THIS ISSUE
MILD ANEMIA AND MOBILITY PROBLEMS IN OLDER WOMEN by Alison McTavish
INTERVIEW WITH DOLLY DASTOOR by Dr. Dolly Dastoor
THE BRAIN BANK by Julie Comber
PHYSICAL TRAINING IN OLDER SENIORS by Alison McTavish
TAI CHI AND PREVENTION OF FALLS by Alison McTavish
SHORTAGES OF WORKFORCE IN HEALTHCARE by Alison McTavish
DID YOU KNOW? A PERSON-CENTRED APPROACH TO DEMENTIA by Alison McTavish

MILD ANEMIA LEADS TO MOBILITY PROBLEMS IN OLDER WOMEN
by Alison McTavish

A nemia is a condition characterized by low levels of red blood cells or hemoglobin and it is common among older women. It’s often a sign of chronic disease and can cause symptoms like fatigue, chest pain, shortness of breath and dizziness. Physicians usually recommend that patients take a combination of iron, folate and vitamin B12 supplements for anemia associated with nutritional deficiencies.

Mild anemia in elderly women has often been dismissed as clinically irrelevant, but it may be a significant health problem. According to the World Health Organization, hemoglobin levels of 12 to 16 g/dL are considered normal. However, a new study of more than 600 women in their 70s suggests that women with a low-normal hemoglobin level of 12 g/dL are more likely to have difficulty performing daily tasks.

The investigators studied 633 elderly women who were living independently. After performing routine health assessments on the women between 1992 and 1996, they took blood samples, then asked the women how difficult it was to

(Continued on page 2)

THE BRAIN BANK: WHERE GENEROSITY AND INNOVATION MEET
by Julie Comber

A t the Douglas Hospital in Montreal, neuroscientists around the world are fortunate to have an indispensable resource: the Brain Bank. The Douglas Hospital Research Centre Brain Bank was founded in 1980 and was the first Canadian cerebral tissue bank. Drs. Yves Robitaille and Paul Etienne’s original idea for the Brain Bank was that it would support local research, but it grew to become an international resource. The Douglas Hospital and its Research Centre are affiliated with McGill University and the World Health Organization. Moreover, the Brain Bank collaborates closely with neuropathologists working at Ste-Justine’s Hospital and the Montreal Neurological Institute. It is primarily funded by the Réseau en santé mentale et

(Continued on page 2)
OLDER WOMEN

MILD ANEMIA LEADS TO MOBILITY PROBLEMS IN OLDER WOMEN
(Continued from page 1)

walk a quarter of a mile or climb 10 steps. They also measured the women's ability to walk, rise quickly from a chair several times, and keep their balance.

Women with hemoglobin levels between 13 and 14 g/dL routinely performed the best in the mobility tests. Those with hemoglobin levels between 12 g/dL performed the worst and those with hemoglobin levels between 12 g/dL and 13 g/dL performed intermediately. The risk of mobility problems for women with hemoglobin levels of 12 g/dL was more than twice as high as for those with higher hemoglobin levels, even after researchers adjusted for all health indicators associated with physical function decline.

The results of this study suggest that the criteria for defining anemia in older women may have to be changed. Such a change may provide help for some of the estimated 35% of women aged 70 to 80 who have difficulty with general mobility tasks like walking a few blocks or climbing a flight of stairs.

Reference
Chaves et al. Looking at the relationship between hemoglobin concentration and prevalent mobility difficulty in older women. Should the criteria currently used to define anemia in older people be reevaluated? J Am Geriatr Soc. 2002 50(7):1257-64.

An interview with Dr. Dolly Dastoor, Clinical-Administrative Chief, Program in Dementia with Psychiatric Co-Morbidity, Clinical Psychologist, Division of Gerontopsychiatry, Douglas Hospital, Assistant Professor, Department of Psychiatry, McGill University, and member of the McGill Centre for Studies in Aging
(Continued from page 1)

a part-time research fellow on a project to examine multidisciplinary assessments of psychogeriatric patients. The approach involved a team-based intervention with a psychiatrist, a physician, a psychologist, and a social worker. "We looked at each patient from different angles and we wanted to see whether having a multidisciplinary assessment would make a difference in the treatment and management of patients", says Dr. Dastoor, adding that the results led to a revamping of the program at the Douglas. The new team was expanded to include a clinical psychologist, a position Dr. Dastoor assumed shortly thereafter.

While clinical work subsequently became her primary focus at the Douglas, she kept her hand in the research world, continuing to study models of cognitive decline with geriatric patients. One of these efforts culminated in the development of the Hierarchic Dementia Scale (HDS) with Dr. Martin Cole (now at St. Mary's Hospital). The HDS is comprised of 20 sub-scales that measure common areas of functionality affected by dementia, such as concentration, reading, calculation, motor skills and memory. Dr. Dastoor notes that the hierarchical organization of tasks within each scale make the test a quick and efficient way to get a prognostic and functional picture of the dementia patient. "Clinicians would normally start in the middle of the scale and go a little bit up and a little bit down... if a patient does poorly on two items in the middle, then you presume that they wouldn't be able to pass items higher on the scale". The HDS was marketed in 1983, and has since gained widespread acceptance and use by clinicians and researchers.

Dr. Dastoor's influence has also been felt here at the Douglas, where she has played an active role in shaping the form of the services available in the Division of Gerontopsychiatry. Perhaps the most visible of these efforts is the recently adopted Program for Dementia with Psychiatric Co-Morbidity (PDPC), the genesis of which was a proposal written by her in the late 1980s. "I noticed that here at the hospital we had a wide range of services available, for instance the memory clinic, the day centre, the inpatient unit, as well as studies in normal aging at one end of the continuum and the brain bank at the other end of the continuum, but they aren't closely connected. So I wanted to pull it all together under one umbrella of dementia services". The ball started rolling - albeit slowly - following her initial proposal, and after several years of committee work, fundraising for a new facility began in the mid-1990s. And if you've driven into the Douglas hospital from Lassalle Boulevard lately, you might have noticed the large amount of construction on the northwest corner of the hospital. This is the almost completed Centre Moe Levin, slated to open at the end of January, 2003, which will house the PDPC.

Dr. Dastoor is particularly excited about the design aspects of the new centre. Hallways are constructed in a circular shape, so patients encounter no "dead-ends" as they move about common areas. A "Snoezelen Room" - a multi-sensorial area for patients that includes soothing colors and aromas - is being installed. Furthermore, aspects of inpatient rooms such as color, furniture, and bathroom layout are specially chosen to both maximize patient function, and aid the hospital staff who care for them. The underlying concept of the centre and the PDPC, she notes, is to use a person-centered approach with the patients. "Dementia isn't a disease where you just give medication and hope for the best. It's really a biopsychosocial illness, and we strongly believe that the environment plays a great role in shaping the behavior of a person with dementia, whether it be aggressiveness, wandering tendencies, or even incontinence".

Dr. Dastoor also believes that in tackling the wider problem of dementia in our aging society, support for caregivers (who are often family members) and education of the community at large, are crucial factors. To this end, she has been involved with many organizations that have promoted such goals, including the Alzheimer's Society of Montreal, of which she was a founding member and president. She is also chair of the Education Committee at the McGill Centre for Studies in Aging (see Geronto-McGill, November 2002), which has initiated projects in local high schools to educate younger people about the...
Do exercise programs reap health benefits regardless of your age? We’ve often heard as much, but actually there has been little research examining this claim with seniors older than 75 years of age. Two studies from Finland in the July 2002 issue of Age and Ageing address this gap, and reveal both positive benefits and potential health problems associated with physical training programs for "older" seniors.

A study by Katie Malbut and her colleagues from the University Medical School in London has reported cardiorespiratory benefits for healthy women aged 79 years and above who participated in a 24-week aerobic training program. Maximal aerobic power (VO2max), a widely used measure of cardiorespiratory fitness, has been shown to decline with age, to the point of making everyday activities such as cooking or cleaning difficult for some seniors. Malbut et al. found their training regimen to increase VO2max by an average of 15% for older female subjects. Strangely, similar benefits of training were not found with males in the same age group. Malbut et al. believe this may have been due to their male participants having initially higher VO2max scores than the women, allowing less room for improvement in their fitness level.

A more cautionary approach to exercise programs is suggested by Kallinen et al: who examined the effects of 18 weeks of strength or endurance training on cardiovascular fitness in women aged 76-78 years. In this case, the elderly women from their population-based sample were suffering from an average of 2-3 chronic conditions, such as hypertension, or musculoskeletal problems; however, none of these conditions were serious enough to exclude them from the study. Strength and endurance training with these subjects resulted in small or insignificant changes in cardiorespiratory fitness. However, an even more troubling result was that 5 out of the 31 subjects from the two training groups dropped out of the study due to the onset of cardiovascular problems. While none of these problems manifested during the actual exercise sessions, Kallinen et al. note that "the possibility remains that physical training could have contributed to these health problems".

Taken together, these two studies provide a mixed picture of the effectiveness and safety of generalized exercise programs for seniors above the age of 80. In an accompanying editorial, Carolyn Greig of the University of Edinburgh suggests that training programs for older seniors should be developed on an individual basis, rather than for groups at large. Certainly, the results of Kallinen et al.’s study minimally suggest further research is necessary to explore the dose-response relationship of physical training with older seniors, particularly those suffering from chronic health problems.

2. Kallinen M, Sipila, S, Alen M, Suominen H. Improving cardiovascular fitness by strength or endurance training in women aged 76-78 years. A population-based randomized controlled trial. Age and Aging 2002; 31: 247-254

A fall can lead a senior citizen into a downward spiral of illness, disability, and even death. Therefore, preventing falls in seniors is a priority. Recently, there has been interest in using Tai Chi, an ancient Chinese martial art, to help prevent falls in seniors. Seniors tend to like the gentle, non-vigorous but continuous movements that involve every body part. It is thought that Tai Chi can help prevent falls because its movements incorporate elements of strengthening, balance, postural alignment and concentration. Unlike other interventions that focus only on one variable (such as resistance, balance, endurance or gait), Tai Chi improves physical function as a whole.

Unfortunately, the results from the many studies on Tai Chi and fall prevention have been scattered and inconsistent. Therefore, Dr. Ge Wu of the University of Vermont, Department of Physical Therapy, performed a systematic review/analysis of the literature on Tai Chi and fall prevention. There are many reasons for the variable results. First, there was no standard measure for study outcomes. Only one study directly assessed whether Tai Chi prevents falls and found it did, while others assessed if Tai Chi improves balance. There is no standard measure of balance, so studies varied in how they measured changes in balance. Second, duration of Tai Chi training varied widely between the studies, with longer-term Tai Chi participation being more likely than a short-term intervention to show positive results. Third, there are different styles of Tai Chi, and it has been speculated that some styles (such as Wu) may be better for improving balance. However, this possibility has not been assessed in the literature. Most studies used the popular Yang style (which may be better for strengthening leg muscles, but may not be as good as Wu at improving balance), or did not specify which style they used. Finally, age, gender and health status of the participants could all have effects on the results, but these factors were generally not assessed.

Wu concluded that the existing literature provided only scattered evidence to support Tai Chi’s purported positive effect on balance and fall reduction in seniors. He recommended that future studies should...
THE BRAIN BANK: WHERE GENEROSITY AND INNOVATION MEET

(Continued from page 1)

neurosciences of the Fonds de la recherche en santé du Québec (FRSQ), as well as by the Douglas Hospital Foundation and private donations.

Human brain tissue is a precious commodity, since animal models are not always relevant for researching human mental disorders. The Brain Bank collects, stores and distributes these precious, generous donations. Donors arrange to donate their brains themselves, or family members may legally consent to the donation on their behalf. Autopsies are performed in regional hospitals close to the deceased at no cost to the family. Specific protocols for handling and processing the brain tissues are followed to ensure high quality preservation. Once the donated brain reaches the laboratories at the Brain Bank, half of it is snap frozen and stored at -80°C in special freezers linked to 24-hour surveillance and a fail-safe emergency electrical supply. The other half of the brain is preserved in a 10% formalin solution. These methods ensure the brain tissues can be stored permanently in a state suitable for cutting-edge scientific investigations.

Once information from the donor’s medical record has been obtained a neuropathological diagnosis of the donated brain is performed. A copy of the neuropathology report is sent to the family of the donor upon their request. The data on the brain is collected and stored in a strictly confidential information bank. Only Brain Bank staff may access this information.

One misconception Dr. Panisset, Director of the Brain Bank, would like to dispel is that the Brain Bank is only for Alzheimer’s disease. “The Brain Bank accepts brains from any neurodegenerative or psychiatric disease, and also from healthy people without any brain disease.” In fact, specimens without disease are extremely important since they serve as controls against which brains with neurological disorders can be compared.

Another common misconception, according to Danielle Cécyre, Coordinator of the Brain Bank, is to think that signing up for organ donation (such as on the Medicare card in Quebec) means any organ can be used for research in addition to transplantation. This is not true. “If a person wants to donate his/her brain for research to our Brain Bank, he/she will have to sign specific consent forms which can be obtained by calling the Brain Bank office at (514) 761-6131 (and mention “Brain Bank”),” she explained.

How do researchers gain access to the stored brains? All bona fide scientists may be granted stored specimens freely. Researchers must submit a proposal of their research project. If the project will be at an academic institution, then researchers must show that their home institution’s Research Ethics Board approved the proposal. Otherwise, the research application must go through the Research Ethics Board at the Douglas. Successful applicants receive the neuropathological diagnosis and some general and clinical information along with the anonymous specimens.

Since 1980, the Brain Bank has received 1320 donations. However, there are now only around 500 specimens in storage, and some of them are missing anatomical structures because these have been supplied to researchers. “That is the reason why it is so important that people continue to donate brains to research. Moreover, with some illnesses, it can be very difficult to get brain specimens because the disease is very rare or because the persons are quite vulnerable and thus the process of obtaining consent for donation is extremely delicate,” said Ms. Cécyre.

The high quality of the brain tissue available at the Brain Bank has allowed researchers in Canada, and worldwide, to discover new information with the hope of improving the treatment and prevention of many mental illnesses, such as Alzheimer’s disease, Parkinson’s disease, depression and schizophrenia. Two examples of discoveries at McGill facilitated by the Brain Bank are those of Drs. Poirier and Srivastava. Dr. Poirier and his colleagues identified a genetic mutation that determines a person’s risk for developing Alzheimer’s. Dr. Srivastava and his colleagues discovered that the level of a protein involved in processing information was low in the brains of schizophrenic patients. Thanks to this invaluable resource, there are sure to be many more enlightening discoveries to come.

DOES TAI CHI PREVENT FALLS IN SENIORS?

(Continued from page 3)

focus on testing subjects who are at risk for falls (rather than only “healthy” seniors), comparing subjects of various age groups, identifying the optimal duration and frequency of Tai Chi programs and searching for the optimal style for fall prevention. Of particular importance, a direct measure of the number of falls should be presented, since improving balance may not be directly related to reducing falls.

In light of Wu’s findings, it will be interesting to see the results of Dr. Hélène Corriveau’s work at Sherbrooke University. Dr. Corriveau will study the effectiveness of a Tai Chi program in preventing falls in elderly diabetics with diabetic peripheral neuropathy. Diabetic peripheral neuropathy leads to nerve damage, which can cause a loss of feeling in the extremities, especially in the feet. This creates balance problems that can increase the risk of falls. Therefore, a study of this patient group would help fulfill Wu’s recommendation of focusing on subjects at risk of falling.

References

The total population in Canada is projected to grow from 30.8 million in 1999 to 35 million in 2041, an increase of 14%. The number of Canadians over the age of 65 will more than double, from 3.9 million in 1999 to an estimated 8.7 million in 2041.

According to 1999 estimates from the Canadian Institute for Health Information, seniors account for 31% of acute hospital stays, and 12% of seniors receive home care from home support workers and from nurses. It is also estimated that older adults account for 25% of all visits to physicians.

As the population ages it is clear that there will be increasing pressure on an already overburdened health care system. However, despite this pressure, relatively few physicians or other health professionals are trained in geriatrics.

Although Canada’s First Ministers agreed to ensure that each government or jurisdiction has people with the skills needed to provide appropriate levels of care and health services, the recent shortages of healthcare personnel reported across the country suggest that keeping this promise may be difficult.

Physician shortage
The number of physicians currently practicing in Canada has dropped 5% since 1993. This is surprising considering Canada was thought to have a surplus of physicians 10 years ago. As a result of the perceived surplus, physicians were encouraged to retire, enrollment at medical schools was reduced, and foreign doctors were discouraged from coming to Canada.

There has also been a steep decline in the number of new medical graduates who choose to become family practitioners. This is bad news for the elderly since these physicians typically provide care for many elderly patients. Although the College of Family Physicians of Canada has accredited university training programs in geriatrics leading to a Diploma in Care of the Elderly, only 1.8% of family practice residents were accepted into these programs in 2001.

There is also a critical shortage of geriatric psychiatrists. Recent studies suggest that up to 80% of nursing home and long-term care residents suffer from psychiatric illnesses, but many have no access to specialized mental health services. One report found that almost 40% of nursing homes have no psychiatric services.

Recently, the Canadian Academy of Geriatric Psychiatry held a national symposium to address these concerns. The participants agreed that a new plan was needed to improve education for health care providers and ensure that all patients receive adequate assessment and treatment.

Nursing shortage
Across Canada there is a marked shortage of nurses. The Canadian Nurses Association predicts a shortage of 114,000 registered nurses within 10 years. Quebec currently employs 62,000 nurses, but healthcare institutions are having difficulty filling 1,500 vacant nursing positions in Montreal alone. The Quebec Order of Nurses estimates that the shortfall for Quebec will be over 19,800 by the year 2015 unless measures are taken now.

The main reasons for the nursing shortage are the aging current nursing workforce, fewer nurses in the education system due to the availability of better paying, less stressful occupations, and job dissatisfaction. Nurses are leaving the profession and others are reluctant to enter.

In the 1970s, approximately 10,000 new nurses graduated in Canada each year. By the late 1990s that figure dropped to about 4,000. The number of new graduates has dropped by over 50% over the last decade, and total enrollment in nursing programs across Canada in 1999 was only 7,600.

The long-term care sector will be hit hardest by the shortage. In Toronto alone, there are almost 9,000 patients waiting for placement in nursing homes or homes for the aged. This situation is likely to worsen in the next 10 years.

Importance of workforce preparation
Recent Royal College guidelines for postgraduate internal medicine training suggest that all trainees receive instruction in geriatric medicine. This agrees with similar recommendations from both the American Geriatric Society and the Canadian Medical Association that geriatric medicine content should be expanded in undergraduate curricula.

According to a report in the Annals of the Royal College of Physicians and Surgeons of Canada, clinical experience in geriatric medicine is associated with improved geriatric knowledge and better attitudes towards treating elderly patients. Residents without training in geriatric medicine were more likely to prefer treating acute illness, younger patients, and patients without cognitive impairment. Attitudes toward the elderly and geriatric knowledge improved with increased years of internal medicine residency training.

The authors conclude that residents have to be prepared to care for the elderly, regardless of whether they choose geriatric medicine or another specialty, since all physicians will see an increasing number of elderly patients in their practices.

National strategy
The Government of Canada recently released the final report of the Commission on the Future of Health Care in Canada (the Romanow report). The report acknowledges the growing elderly population and emphasizes the need for increased federal government spending on healthcare. Of particular note is the recommendation for a home care transfer of $2 billion over two years to provide a foundation for an eventual national homecare strategy.

The demographics of the situation are clear, but solutions are less clear. Although the Romanow report has addressed these issues, the government will have to decide how they will implement the recommendations, and more importantly, where they will find the resources.

Sources:


An interview with Dr. Dolly Dastoor, Clinical-Administrative Chief, Program in Dementia with Psychiatric Co-Morbidity, Clinical Psychologist, Division of Gerontopsychiatry, Douglas Hospital, Assistant Professor, Department of Psychiatry, McGill University, and member of the McGill Centre for Studies in Aging

(Continued from page 2)

myths and stereotypes surrounding the elderly, and in particular those stricken with dementia.

Apart from her long list of accomplishments and more than 25 years of service to the Douglas, Dr. Dastoor can lay claim to one more recent achievement: the completion of her Ph.D. She took a year off to complete the necessary coursework, and after finishing her doctoral research (investigating rates of decline in dementia), she graduated in 1998 from Concordia University. Although she originally postponed her higher education for family, she credits her two children with encouraging her to return to school, and proudly notes that all three of them graduated with a doctorate in that same year (two Ph.D. and one with a medical degree).

Upon reflecting on her career, Dr. Dastoor notes that she often hears, and is perplexed by, the same question. "People often ask why I would want to work with elderly demented patients, and don't I find it depressing? I've never felt it was depressing work. Some of the patients have gone through such tremendous hardships in their lives before becoming ill, and in spite of it all there is so much resilience of human spirit to be able to live, and to smile, that it's something to envy. I've always found the work exhilarating".

DID YOU KNOW...?

Of Canadian seniors who still live at home, 78% report their health as "good" (38%), "very good" (28%), or "excellent" (12%), while only 16% reported their health as "fair", and just 6% described it as "poor".


Alcohol is the most common drug used by older Canadians. Older individuals are much less likely to report problems with alcohol than younger individuals.