

# Chapter 1: Geriatric Nephrology Has Come of Age: At Last

Dimitrios G. Oreopoulos\* and Jocelyn Wiggins<sup>†</sup>

\*Department of Medicine, University of Toronto, Toronto, Canada; and <sup>†</sup>University of Michigan, Ann Arbor, Michigan

On May 23–24, 1985, the first International Symposium on Geriatric Nephrology was held in Toronto. In his excellent review of the symposium,<sup>1</sup> Michael Kay commented on the challenges and risks facing aged individuals and, in view of the increased costs of their care, the ethical issues facing the caregiver. His report stressed the fact that “the degree of humanity in our healthcare world will be made evident in the way we treat (or do not treat) our minorities, our underprivileged, our poor, our mentally infirm, those who have no voice to speak for themselves, and finally, the aged.”

After that successful initial meeting, the International Society of Geriatric Nephrology was formed, with its own journal—the *International Journal of Geriatric Nephrology and Urology*—and five additional international meetings of the International Society were held at Salamanca, Lisbon, Atlanta, Thessaloniki, and Antalya.

Despite all these efforts and activities, the interest among nephrologists concerning geriatric nephrology did not increase and, if anything, was decreasing. Membership in the Society and participation to the meetings were small. Also subscriptions to and submission of articles to the Society’s journal were not sufficient to sustain it. As a result, the publisher decided to publish the journal as a section in the journal *International Urology and Nephrology*.

All these regrettable circumstances seem to have changed because of two important factors that have contributed to a renewed interest in geriatric nephrology. First is the amazing increase in the incidence of new patients with ESRD over the age of 65; this segment of our population is the fastest growing group of patients requiring dialysis, and it continues to grow. Thus, nephrologists forced to practice as amateur geriatricians now recognize the need to master all aspects of geriatrics. Second, the introduction and automatic reporting of estimated GFR (eGFR) using the Modification of Diet in Renal Dis-

ease (MDRD) formula has revealed a large number of patients who have impaired kidney function, most of whom are elderly. Primary care physicians are inundated with elderly patients with impaired kidney function and, in turn, are flooding the nephrologists with referrals.

Nephrologists have had to take a serious look at the plight of elderly, and probably as a result, three important developments have ushered in the new era of Geriatric Nephrology.

1. For the first time, the American Society of Nephrology has included in its annual Renal Week program a 2-d course on geriatric nephrology that was sold out and that kept the interest of the participants to the end. All these presentations have been taped and are available, with the accompanying slides, at [http://asn-online.org/education\\_and\\_meetings/media/geriatrics/](http://asn-online.org/education_and_meetings/media/geriatrics/). A similar course has been planned for the 2009 ASN meeting.
2. Recognizing that geriatric nephrology is now essential to nephrology training, the Accreditation Council for Graduate Medical Education (ACGME), in its program requirements for training in nephrology, has mandated that “fellows must have formal instruction, clinical experience and demonstrate competence in the prevention, evaluation and management of geriatric aspects of nephrology, including disorders of ageing kidney and urinary tract.” In addition, the ACGME has mandated that “fellows must receive formal instruction in geriatric medicine, including physiology and pathology of the ageing kidney, and drug dosing and renal toxicity in the elderly patient.”

In response to the above, the Chair of the ASN Training Program Directors Committee (Dr. Donald Kohan) invited a group of individuals to form a committee to design a curriculum by identifying the topics and authors to write the corresponding chapters and we were honored to be asked to co-chair it. We were impressed by the enthusiasm of all members of the committee (Table 1). The committee identified 37

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**Correspondence:** Dimitrios G. Oreopoulos, University Health Network, 399 Bathurst Street, 8E-408, Toronto, Ontario M5T 2S8, Canada. E-mail: [dgo@teleglobal.ca](mailto:dgo@teleglobal.ca)

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**Table 1. Geriatric Nephrology Curriculum Committee Members (in alphabetical order)**

|                          |                       |
|--------------------------|-----------------------|
| Abrass, Christine        | O'Hare, Ann           |
| Abdel-Rahman, Emaad      | Oliver, Matthew       |
| Campbell, Kellie         | Oreopoulos, Dimitrios |
| Danziger, John           | Owens, Suzan          |
| Dubeau, Catherine        | Patel, Sanjeevkumar   |
| Dubose, Tom              | Quinn, Robert         |
| Feinfeld, Don            | Reckelhoff, Jane      |
| Ferrucci, Luigi          | Rosner, Mitchell      |
| Friedman, Eli            | Sands, Jeff           |
| Gambert, Steven          | Schlanger, Lynn       |
| Hartman, Erica           | Shim, Rosemare        |
| Hollander, Jay           | Singh, Harmeet        |
| Jassal, Vanita           | Stankus, Nicole       |
| Kuchel, George           | Striker, Gary         |
| Kujubu, Dean             | Swartz, Richard       |
| Leinau, Lisa             | Swidler, Mark         |
| Mehta, Manisha Juthani   | Tamura, Manju         |
| Michelis, Michael        | Unruh, Mark           |
| Miller, Myron            | Vijil, Julio          |
| Miyawaki, Bill           | Wiggins, Jocelyn      |
| Mohamed, Maha            | Williams, Mark        |
| Morley, John             | Winkelmayer, Wolfgang |
| Munikrishnapappa, Devraj | Wright, Seth          |

chapters (Table 2). These chapters are short (5 to 6 pages) and emphasize only knowledge related to geriatric nephrology. They provide key references for further reading and a number of multiple choice questions at its end.

- In 1998, ASN agreed to create a process to develop geriatric nephrologists. A workshop was held to review the process and, in conjunction with the Association of Specialty Professors (ASP), a program of career development awards for geriatric nephrologists was initiated. One or two awards are made on a competitive basis each year to a junior faculty nephrologist who commits to develop a career in some aspect of geriatric nephrology. Applications are reviewed by the ASN, and successful candidates are referred to ASP. ASP manages a fund provided by Atlantic Philanthropies and the Hartford Foundation and makes the T. Franklin Williams Scholarship Award each year. The scholarship provides 2 yr of funding for career development in a combination of nephrology and geriatric skills. The first scholarships were awarded in 2003, and a total of nine scholarships were awarded through 2008. It is anticipated that these scholars will form a group that will become leaders in this area and train others to provide age-sensitive nephrology care in the future. Several of these scholars have contributed to the writing of the curriculum initiative discussed above.

In collaboration with various geriatric groups, our committee will develop teaching tools in the diagnosis and management of various geriatric entities.

The curriculum will be available at the ASN's website. We are confident that it will strengthen the teaching of geriatric nephrology not only in the United States but also throughout the world. A number of colleagues from other countries have already expressed great interest suggesting that, at last, geriatric nephrology has come of age. We look forward to its rapid growth.

**Table 2. Geriatric Nephrology Curriculum chapters**

| Table of Contents                                                                                                                       | Author(s)                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| Geriatric Nephrology Has Come of Age: At Last                                                                                           | Dimitrios Oreopoulos and Jocelyn Wiggins                    |
| Why Do We Need a Geriatric Nephrology Curriculum?                                                                                       | Jocelyn Wiggins and Dimitrios Oreopoulos                    |
| The Coming Pandemic of Chronic Kidney Disease/ESKD and the Aging Population                                                             | Jocelyn Wiggins and Sanjeet Kumar Patel                     |
| Kidney Senescence                                                                                                                       | Lynn Schlanger                                              |
| Rate of Decline in eGFR and Clinical Evaluation of the Elderly With a Low eGFR                                                          | Ann O'Hare and Rose Shim                                    |
| Limitations of Various Formulae and Other Ways of Assessing GFR in the Elderly: Is There a Role for Cystatin C?                         | Devraj Munikrishnapappa                                     |
| Decline of Renal Function in Normal Aging, Role of Oxidants/Inflammation: When Does It Begin, Is It Inevitable, Preventable, Treatable? | Helen Vlassara, Luigi Ferrucci, James Post and Gary Striker |
| Diabetic CKD in the Elderly                                                                                                             | Mark Williams                                               |
| Drug Dosing and Renal Toxicity in Elderly Patients                                                                                      | William Bennett                                             |
| Glomerular Disease in the Elderly                                                                                                       | Christine Abrass                                            |
| Hypertension, Chronic Kidney Disease, and the Elderly                                                                                   | Ann O'Hare                                                  |
| Cardiovascular Disease in the Elderly With Kidney Disease                                                                               | Wolfgang Winkelmayer                                        |
| Vascular Disease in the Elderly                                                                                                         | Nobuyuki Miyawaki and Paula Lester                          |
| Bone Disease and Calcium Abnormalities in the Elderly With CKD                                                                          | Harmeet Singh                                               |
| Anemia in the Geriatric Population With CKD                                                                                             | Julio Vijil                                                 |
| Disorders of Serum Sodium Concentration in the Elderly                                                                                  | Michael Michelis                                            |
| Fluid Balance Disorders in the Elderly                                                                                                  | Myron Miller                                                |
| Acute Kidney Injury in the Elderly                                                                                                      | Mitchell Rosner                                             |
| Nocturia in the Elderly Persons and Nocturnal Polyuria                                                                                  | Dean Kujubu                                                 |
| Hemodialysis in the Elderly                                                                                                             | Seth Wright                                                 |
| Vascular Access for Hemodialysis in the Elderly                                                                                         | Seth Wright and John Danziger                               |
| Peritoneal Dialysis in the Elderly                                                                                                      | Seth Wright and John Danziger                               |
| Assisted Home Dialysis in the Elderly                                                                                                   | Matthew Oliver and Robert Quinn                             |

**Table 2. Continued**

| Table of Contents                                                                                                                                                                                         | Author(s)                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Renal Transplantation in the Older Adult                                                                                                                                                                  | Erica Hartman                      |
| Interaction of Dialysis Teams With Geriatricians                                                                                                                                                          | Nicole Stankus and Kellie Campbell |
| Comprehensive Geriatric Assessment: A Multidimensional Process Designed to Assess an Elderly Person's Functional Ability, Physical Health, Cognitive and Mental Health, and Socio-Environmental Situation | Stephen Gamber                     |
| Rehabilitation Services for Elderly Dialysis Patients                                                                                                                                                     | Vanita Jassal                      |
| Integrated Care of the Elderly With ESRD                                                                                                                                                                  | Jocelyn Wiggins                    |
| Nutrition and the Kidney in the Elderly Patient                                                                                                                                                           | John Morley                        |
| Urinary Incontinence in the Elderly                                                                                                                                                                       | George Kuchel and Catherine DuBeau |
| Lower Urinary Tract Conditions in the Elderly Population                                                                                                                                                  | Damon Dyche and Jay Hollander      |
| Urinary Tract Infections in Elderly Persons                                                                                                                                                               | Manisha Juthani-Mehta              |
| Falls in Elderly Patients With Kidney Disease                                                                                                                                                             | John Morley                        |
| Association Between CKD and Frailty and Prevention of Functional Losses                                                                                                                                   | Emaad Abdel-Rahman                 |
| Methods to Assess Quality of Life and Functional Status and Their Applications in Clinical Care                                                                                                           | Tara Chang and Manjula Tamura      |
| Recognizing Delirium, Dementia, and Depression                                                                                                                                                            | Manjula Tamura                     |
| Dialysis Decisions in the Elderly Patient With Advanced CKD and the Role of Nondialytic therapy                                                                                                           | Mark Swidler                       |
| End of Life and Decision-Making in Elderly Patients With ESRD                                                                                                                                             | Richard Swartz and Erica Perry     |