



Maria M. Picken, MD, PhD, FASN, FCAP
Recipient of April 2009 Spotlight Service Award

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As the saying goes, when your neighbor loses his/her job, it's a recession. When you lose yours, it's a depression. Much the same could be said of rare diseases: out of sight, out of mind, until someone steps up to give these patients their due.

As a renal and transplant pathologist, Maria M. Picken, MD, PhD, FASN, FCAP, knows when an alert pathologist identifies amyloidosis in someone whose inexplicable symptoms have driven an extended search for relief, the impact is life changing. Dr. Picken knows these patients and their families. Amyloidosis is not merely theoretical to her.

Dr. Picken has many interests and commitments. The current president of the Renal Pathology Society, she is widely published and often invited to speak at international pathology and nephrology meetings. But when Maria Picken is asked about amyloidosis, a certain passion animates her speech. It is not difficult to ascertain why she was recently selected to receive the CAP Spotlight Service Award for her work as a medical advisor to the Amyloidosis Support Groups (ASG).

When Dr. Picken talks about amyloidosis diagnosis ("not easy" but also "not rocket science") her cadence and intensity accelerate. "To diagnose amyloidosis, pathology sections must be stained with Congo red stain and examined under polarized light. This stain is not routinely used and may be a little capricious," she admits, "but without it, amyloidosis cannot be diagnosed."

It is important that pathologists use appropriate equipment, Dr. Picken explains, which means a proper polarizer. (Some attempt to achieve the same result by angling two pieces of film against each other, she says, which she compares to using a goose feather to write reports.) "The cost of a polarizer, estimated at \$200, is not prohibitive," she adds.

Amyloidosis is a multi-organ disease caused by the deposition of abnormally folded proteins. It can be associated with plasma cell dyscrasia/multiple myeloma (most frequently), or with chronic inflammatory processes such as rheumatoid arthritis and Crohn's disease. About 1 in 10 cases is hereditary and due to a genetic error in the primary structure of one of various proteins.

The Amyloidosis Foundation estimates that 50,000 persons worldwide are diagnosed with the disease each year, including 3,000 cases in North America. Until recently, amyloidosis was perceived to be a relatively rare disorder with no available treatment—a dead-end diagnosis. But today, the pathologist who identifies amyloidosis can end a long search for relief. If diagnosed early, treatment of this disease can be effective and durable.

Modern treatments may range from stem cell transplantation and chemotherapy to liver transplantation, depending on the amyloid type. Symptoms are notoriously varied. “Some patients may have protein in the urine and develop chronic kidney failure while others will have peripheral polyneuropathy or gastrointestinal problems” says Dr. Picken. “Cardiac involvement is the most threatening because, when severe, it precludes liver transplantation or aggressive chemotherapy.”

“Pathology is gaining more importance in patient management, most visibly in cancer therapies,” says Dr. Picken, a professor of pathology, director of renal and transplant pathology, and head of the tissue repository at the Loyola University Medical Center in Maywood, Illinois. “But there is another area of pathology where the pathologist’s interaction with the clinician is very important: the *medical* diseases.”

Working with nonsurgical clinicians caring for patients with chronic diseases calls for a separate set of skills and creates transformational roles for pathologists, Dr. Picken points out. Amyloidosis is one such disease, rare but unfortunately also underdiagnosed. “People don’t know much about it, and frequently the patient moves from one physician to another before the diagnosis is finally made at advanced stage,” she says. “Biopsies for medical diseases require a certain degree of expertise and knowledge of the clinical aspects. We need to research the clinicopathologic correlations.”

In Dr. Picken’s view, pathologists should take ownership of such conditions as diagnosticians and advocates. “Talking to these patients makes you realize that what you put in your diagnosis line has a very significant impact,” she says, More so because no chemical, biochemical, laboratory, or urine test is available.

“For amyloidosis, you need a tissue diagnosis,” Dr. Picken says. “So it is up to us.”