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CHILDHOOD KIDNEY DISORDER HAS LASTING EFFECTS

Minimal Change Nephrotic Syndrome Can Cause
Osteoporosis, Hypertension, Cataracts, and Sperm Abnormalities

Washington, DC (September 22, 2009) — A kidney condition that can arise in children and was until recently believed to disappear after puberty may persist into adulthood and cause significant long-term complications, according to a study appearing in an upcoming issue of the *Clinical Journal of the American Society Nephrology* (CJASN). The findings indicate that better treatment options are needed for children with the disorder, called minimal change nephrotic syndrome.

Many children who develop minimal change nephrotic syndrome—a disorder that largely affects the blood filtering structures of the kidneys—can be successfully treated with prednisone. The cause of the syndrome is unknown but may be related to an autoimmune illness. Unfortunately, 10% to 40% of patients suffer relapses after childhood and must be treated long-term with immunosuppressive drugs.

To determine the lasting health effects of minimal change nephrotic syndrome and its treatment in patients who are not cured during childhood, Henriette Kyreileis, MD, PhD (Radboud University Nijmegen Medical Centre, The Netherlands) and Elena Levtchenko, MD, PhD (University Hospitals, Leuven, Belgium), and their colleagues studied 15 adult patients with the disease. The investigators ran a number of tests on the patients—including blood and urine analyses; semen analyses in men; x-ray exams; eye exams; and genetic tests.

Hypertension was found in 7 of the 15 patients, and osteoporosis was present in five of the patients. Eye exams revealed nearsightedness in 10 of the patients and cataracts in three of the patients. In the eight male participants in the study, low sperm count was found in one patient, reduced sperm motility was detected in four patients, and defective sperm were present in six patients.

The analysis revealed that while adults being treated for minimal change nephrotic syndrome may maintain normal kidney function, they frequently experience other serious health problems. Long-term immunosuppressive treatments may be the cause and/or may contribute to the development of these adverse

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effects. “Our study underscores a need for more effective and less toxic therapies for relapsing minimal change nephrotic syndrome,” the authors wrote.

The authors report no financial disclosures. Study co-authors include Marije Löwik, Ing, Isle Pronk, Ing, Jan Kremer, MD, PhD, Wim Oyen, MD, PhD, Lambertus van den Heuvel, PhD, Johannes Cruysberg, MD, PhD, and Jack Wetzels, MD, PhD (Radboud University Nijmegen Medical Centre, The Netherlands).

The article, entitled “Long-Term Outcome of Biopsy-Proven, Frequently Relapsing Minimal-Change Nephrotic Syndrome in Children,” will appear online at http://cjasn.asnjournals.org/ on September 24, 2009, doi 10.2215/CJN.05691108.

Founded in 1966, the American Society of Nephrology (ASN) is the world’s largest professional society devoted to the study of kidney disease. Comprised of 11,000 physicians and scientists, ASN continues to promote expert patient care, to advance medical research, and to educate the renal community. ASN also informs policymakers about issues of importance to kidney doctors and their patients. ASN funds research, and through its world-renowned meetings and first-class publications, disseminates information and educational tools that empower physicians.

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