Consider Fetal Risk When Managing Kidney Disease

In the past, women with diabetic nephropathy tended to have a high rate of maternal complications, including overt nephropathy, hypertension, and death due to unrecognized coronary artery disease. But women for whom women with diabetic nephropathy have improved. One study detected no difference in the rate of decline in renal function between a group of women with diabetic nephropathy who became pregnant and another that did not. Lupus nephropathy can be challenging for patients and physicians, Dr. August noted. "There is a poor outcome when the disease is active at conception," she said. A high percentage of patients—as many as 50%-80%—will experience a disease flare during pregnancy, they have active disease at conception. On the other hand, only 10%-40% of women who are in remission at conception will have a flare. Azathioprine can be safely used to treat pregnant women with lupus nephritis. Dr. August also advocated delivery during the third trimester in gravid women whose lupus nephritis is deteriorating quickly. The mother’s condition often improves quickly after delivery.

Women with lupus and antiphospholipid antibody syndrome are also at higher risk of fetal loss, arterial and venous thrombosis, renal vasculitis, and preeclampsia. Women with this syndrome may benefit from taking low-molecular-weight heparin, with or without aspirin.

Although the outlook has improved for women with certain types of chronic kidney disease who wish to bear children, the chance of a good pregnancy outcome in women with end-stage renal disease on dialysis remains poor. Women on dialysis who get pregnant have a high incidence of adverse outcomes such as second trimester pregnancy loss, prematurity, and congenital abnormalities. For these women, attempted pregnancy "should never be encouraged," Dr. August said.

ACEIs and ARBs are vital in diabetic nephropathy, but as soon as a woman misses her period, she should be switched to a safer agent for the fetus.

Nocturnal Hypertension Explored as Risk Factor for Nephropathy

Chicago — With the goal of preventing renal complications in type 1 diabetes, nephrologists have begun to focus on subtle increases in nighttime blood pressure as a risk factor for the development of overt nephropathy.

"It is a concept we are pioneering, a very promising approach," Dr. Daniel Battle said at a meeting on clinical nephrology sponsored by the National Kidney Foundation. In a prospective study, he and his associates followed 75 young type 1 diabetes without microalbuminuria at baseline for 2 years. None of the women had developed any urinary protein, but 18% of the subjects went on to develop microalbuminuria. In those who developed microalbuminuria, the mean systolic pressure during sleep increased significantly (from 109.9 to 114.9 mm Hg). This group had elevated systolic blood pressure only at night (Kidney Int. 2003;63:2319-30). This line of research is a departure from the classic reasoning that blood pressure does not start to increase until overt proteinuria occurs in diabetes, noted Dr. Batlle, chairman of the nephrology department at Northwestern University, Chicago.

"No specific treatments for mild nocturnal hypertension have been developed, but a 5-year National Institutes of Health study of 300-400 patients should shed more light on the importance of nocturnal hypertension in diabetics," said Dr. Battle, the study's principal investigator. "Systolic hypertension seems to be a more powerful predictor that diastolic," he added.

Nephrologists have long considered microalbuminuria to be the best marker for predicting progression of renal disease. But recent studies suggest that the cumulative incidence of overt nephropathy in patients with type 1 diabetes and microalbuminuria is only about 25%. "So obviously, microalbuminuria is not as good a predictor as we thought," he explained.

In addition to microalbuminuria, researchers also have considered histology and genetics in the search for a marker for an increased risk of nephropathy. Renal biopsies of 170 type 1 diabetes with albuminuria that re¬gressed in some patients but progressed in others revealed that a wider glomerular basement membrane could lead to the development of proteinuria (Diabetes 2005; 54:2164-71). Researchers have not yet shed light on the genetic nature of proteinuria. "We don’t have a good genetic marker," Dr. Battle said.

A family history of nephropathy confers the greatest risk of the subsequent development of microalbuminuria. Other clinical risk factors for progression include poor control of diabetes, control, an increase in urinary albumin excretion that is still within the normalalbuminuria range, and hyperlipidemia.