Seek 24-Hour Urine in Suspected Preeclampsia

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KAILUA KONA, HAWAII — Don't rely on dipsticks to detect proteinuria in pregnant patients with suspected preeclampsia, Dr. Michael A. Belfort said at a conference on obstetrics, gynecology, perinatal medicine, neonatology, and the law.

Instead, get a 24-hour urine collection. If there's not time for that, get a 12-hour urine collection, and order a pregnancy-induced hypertension panel if there is new-onset hypertension, said Dr. Belfort, professor of maternal-fetal medicine at the University of Utah, Salt Lake City.

Dipstick results depend on protein concentrations, which are altered by urine volume. A preeclamptic woman on bed rest will mobilize fluid and increase urine output, potentially diluting urine enough that the protein concentration falls below the minimum level of 20 mg/dL read by dipsticks, he said.

A dipstick for a woman with 3.2 g of protein in 1,500 cc/day of urine will report 20 mg/dL of protein, erroneously suggesting that only a trace of protein is present. "Until we have more sophisticated ways of determining proteinuria, the dipstick is a screening kit, and the gold standard is 24-hour urine collection," he said.

To diagnose preeclampsia, look for proteinuria (urinary excretion of 0.3 g protein or higher in a 24-hour urine specimen) and new-onset hypertension (at least 140 mm Hg systolic or 90 mm Hg diastolic after 20 weeks' gestation).

Consider not only the blood pressure on a particular day but also the trend in blood pressure over weeks, Dr. Belfort said.

The American College of Obstetricians and Gynecologists recommends checking platelets, liver enzymes, renal function, and 12- or 24-hour urine collection for protein to rule out preeclampsia. If you order lab tests, be sure to get the results, he cautioned at the conference sponsored by Boston University

"It is possible that a physician may choose to admit the patient, order the lab, and get a dipstick the next morning before seeing the protein level in a timed collection of urine. The physician then sends the patient home on the strength of the dipstick. If you do not wait for the 24-hour urine collection … some of these patients may end up coming back with a cerebral infarct," he said.

Physicians in a consultative practice, as Dr. Belfort is, often advise other people to order labs instead of doing it themselves.

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It may be dangerous to send a pregnant patient with very elevated blood pressure home with a letter suggesting that her doctor order lab tests.

"There's an onus upon you to make sure that patient is going to be okay and [that] you don't find out about some wacky result like really low platelets or very elevated liver enzymes 3 days later as you're flipping through the paperwork on your desk," he said.

Dr. Belfort orders the labs, and either he or his staff calls the patient's doctor to say the labs have been sent. They instruct the patient to call her doctor that evening if she has not been contacted about the results. All this is documented in the patient's chart.

When ordering labs, not every patient needs a coagulogram, but you should get one for a patient with less than 100,000 platelets, he said. A patient with a very low platelet count and a normal coagulogram may have thrombotic thrombocytopenic purpura. "The worst thing you can do for somebody with [thrombotic thrombocytopenic purpura] is give them a bag of platelets. It's like throwing kerosene on a fire," he said.

Be conservative when deciding whether to admit a patient with suspected preeclampsia, Dr. Belfort suggested. Certainly any patients with headache, visual disturbances (scotomata), bruising, bleeding, significant edema, any kind of head or abdominal pain, or other complicating features should be admitted. Think carefully about what is to be gained or lost by delaying delivery in a preeclamptic patient with a viable fetus, he added. "Beyond 32 weeks [gestation] in severe preeclampsia, there is very little to be gained. ■

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