Document Twins' Chorionicity in First Trimester

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SAN FRANCISCO — Physicians should demand that first-trimester ultrasounds of twins document whether they share a placenta or have separate placentas, Dr. Vickie E. Feldstein said at a meeting on antepartum and intrapartum management.

Monochorionic twins, who share a placenta, face higher risks than dichorionic twins, and management differs based on chorionicity. It's much easier to determine chorionicity in the first trimester than in the second, she said at the meeting sponsored by the University of California, San

"Most of the women with twins that I see in the second trimester were picked up as having twins sometime in their first trimester by somebody, and often all they've been told is there are 'two sacs.' Sometimes that's all the information that's been recorded" in the patient's record, said Dr. Feldstein, professor of clinical radiology and ob.gyn. at the university. "Two sacs" does not differentiate between dichorionic twins or higher-risk monochorionic, diamniotic twins.

The first essential step is to look for twins during that first-trimester ultrasound, Dr. Mary E. Norton added in a joint presentation with Dr. Feldstein.

"It's really important any time you put the transducer down on your patients in pregnancy to make a conscious effort to think about how many embryos or fetuses are there," said Dr. Norton, director of perinatal medicine and genetics and professor of ob.gyn. at the university. "It's an embarrassing mistake for anyone to make to miss an entire fetus, but it happens a lot."

If you see one fetus, don't be distracted by looking at it. Remember to sweep the ultrasound transducer up, down, forward and backward to image the whole uterus, and consciously think about counting how many fetuses are there, she advised. For twins, look for the number of placentas, take a picture, and document it.

Monochorionic twins necessarily are monozygotic or so-called "identical" twins. Dichorionic twins can be monozygotic or dizygotic twins.

Monochorionic twins are at greater risk for discordant growth, anomalies, preterm labor, and death. Only monochorionic twins can develop twin-twin transfusion syndrome. If one twin dies in utero, that

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greatly increases the risks for the other twin in monochorionic but not in dichorionic pregnancies.

Be sure to look for twins after in vitro fertilization, Dr. Norton said. "Monozygotic twinning more common than one might

think after IVF." Approximately 2% of embryos split into twins after conventional IVF, or up to 5%-10% after blastocyst transfer. "Just because someone had two embryos implanted by IVF does not mean that they have to be dichorionic twins" if twins are present, she said.

Monochorionic twins get followed at her institution every 2-3 weeks in the second trimester to watch for amniotic fluid discordance or evidence of twin-twin transfusion syndrome. Dichorionic twins that are growing appropriately are seen every 6 weeks. Chorionicity can be difficult to determine in the second trimester if all that's seen on ultrasound is a single placental mass, which could be a fused dichorionic pregnancy or a monochorionic pregnancy. There are clues that can help, if a patient's record doesn't include a placenta count, Dr. Feldstein said.

Ask the patient if she has a first-trimester ultrasound-she may pull one out of her pocketbook, in Dr. Feldstein's experience. If two fetuses are of the opposite sex, they must have two placentas, she said. If they're the same sex, this could be either a monochorionic or dichorionic pregnancy.

A "twin peak" sign and thicker membrane on ultrasound suggest two placentas fused together. If you don't see the twin peak sign and only a thin membrane, it's likely a monochorionic pregnancy. A thin membrane can be hard to visualize.

If you can find the two umbilical cord insertion sites and turn on color Doppler, look for an artery-to-artery connection a telltale sign of a shared placenta.



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