

Level 1, Level 2, Level 3 Obstetric Sonography: I'll See Your Level and Raise You One¹

IF you recognize the implication expressed in the title of this editorial, then it is likely you will share, as well, a distaste for the direction obstetric sonography is taking in the United States. Recently, I received a call from a clinician asking whether I performed level 4 obstetric sonography. I had never heard of level 4 sonography and still have no idea what such an examination entails, but the request itself struck an unusual chord within me. I recognized this clinician's statement as part of a growing problem in obstetric sonography. Uncharacteristically for me, I shot back that I only perform level 5 sonography. Rather than chastise me for this cavalier statement, he instead thanked me, and his patient dutifully reported the next day with a request for a level 5 sonogram.

Historically, the notion of "levels" of obstetric sonograms found its way into our vocabulary by way of maternal serum α -fetoprotein (MSAFP) screening programs (1). These programs described two levels of sonography, and each examination had specific goals. Level 1 sonography was performed largely to detect obstetric problems that result in high MSAFP levels (twins, erroneously dated pregnancies, fetal demise), while the level 2 examination was performed to identify the fetal anomalies (open neural tube defects, abdominal wall defects) that these programs were instituted to detect. Thus, to a certain extent, the distinction between level 1 and level 2 sonography connotes an element of difference in the "skill" of the examiner. Those doing level 2 examinations usually have demonstrated experience in the diagnosis of fetal anomalies. It does not, however, connote that a level 1 examiner is unskilled.

Unfortunately, modern sonography is rife with virtually untrained practitioners who are employing this imaging tool like an open cash register drawer. It is not my intention to single out obstetricians or to exonerate radiologists in this accusation.

Both specialties are guilty, and others are rapidly joining their ranks. Many obstetricians who are expert sonologists abhor this practice. Neither is this problem an issue of "turf." It is plainly and simply an issue of good medical practice versus bad medical practice. These untrained physicians have latched onto the phrase "level 1 examiner" as though it were a cloak of protection for their lack of knowledge. Any longer, when I am consulted by a physician who begins the conversation by stating "I only do level 1 sonography" or "I can only do level 1 sonography on my machine," the conversation usually quickly confirms that the physician, in practice, does not do "sonography" at all; he or she simply bills for sonograms after waving "the magic transducer" over the mother's abdomen and entertaining her for a while.

This practice has caused physicians who have been serious students of sonography to reflexly "upgrade" the service they perform for patients to "level 2" sonography, to distinguish themselves from the untrained practitioners in their communities. The select practitioners who provided a sonographic referral service for patients in the community with particularly complex problems were forced to elevate their credentials to "level 3." Unfortunately, after 6 months or so of "self" training, often in a self-referral office setting, the erstwhile untrained practitioner begins to realize that he/she can measure a biparietal diameter or recognize a twin pregnancy. Quite naturally then, these physicians upgrade themselves to "level 2 examiners," leaving the remainder of the chain of examiners to take the obvious defensive step: "I'll see your level and raise you one." If you see the humor in the above progression, I am certain you see also the dismal future it portends.

The concept of using the term "level 1" as a shield for incompetency is appalling. Indeed, a level 1 examination of a pregnant woman is a well-defined and complex examination that requires a high degree of competency. For all intents and purposes, level 1 sonography is the standard second- or third-trimester obstetric sonographic examination as described in the American Institute of Ultrasound in Medicine/American College of Radiology guidelines published in 1986 (2). Its goals are documentation of fetal life, determination of fetal number, acquisition of fetal biometric data (and the subsequent calculations that can be made from these), estimation of amniotic fluid volume, pla-

cental localization, and recognition of adnexal masses. While the examination is not specifically done to detect fetal anomalies, there is a reasonable probability that, during the course of the data acquisition, many anomalies, if present, will be recognized, and a prudent effort should be made to do so. This complicated examination is not an exercise for unskilled physicians, and patients undergoing this examination have a right to expect that the responsible physician has the appropriate knowledge to conduct the test.

Level 1 sonography is not defined by the technical capability of the examiner. For example, our hospital is a prenatal diagnostic center, is involved in the California MSAFP program, is a high-risk obstetric center, and supports a tertiary neonatal intensive care unit. Despite the complexity of the obstetric sonography performed in this setting, the vast majority of the examinations performed on these patients are "level 1" studies.

Neither is level 1 sonography defined by the cost of the sonographic instrumentation employed. The instrumentation selected to perform the examination does not alter the physician's responsibility to appropriately visualize and document the features defined in the standard obstetric sonogram. The untrained practitioner usually purchases poor-quality, low-cost instrumentation. It is ironic that the individuals least capable by training to conduct the examination also select the instrumentation least capable of accomplishing the goals of the examination.

If you perform obstetric sonography in a referral setting, you know that this editorial describes a truth that is sickening to those who still believe the practice of medicine to be an honorable and self-sacrificing pursuit. We have watched this process developing long enough to realize that it will never disappear unless the organizations we look to for leadership provide some. ■

References

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