TIPS FROM PRACTICE

Meconium Drug Screening to Detect Prenatal Substance Abuse

The complications faced by mothers and their infants antenatally as a result of maternal drug use during pregnancy include preterm birth, abruptio placentae, and low birthweight. Following release from the hospital, the infants of mothers who continue to use drugs after giving birth are at further risk, especially for abuse and neglect. To improve identification of maternal drug abuse, meconium drug screening can be an adjunct to traditional detection methods.

Meconium consists of desquamated fetal epithelial cells, bile, intestinal tract secretions, and residue of amniotic fluid swallowed by the fetus. Drug metabolites are deposited in meconium through bile secretion and/or by swallowed amniotic fluid (fetal urine).[1] Screening meconium for drug metabolites was first proposed by Ostrea et al[2] in 1988. Further studies have shown that meconium screening is a reliable alternative to traditional toxicology methods.[1,3,4] Because meconium is formed throughout much of gestation, drug metabolites can be detected as early as the middle of the second trimester. For example, cocaine metabolites have been detected in the meconium of a spontaneously aborted fetus at 17 weeks' gestation.[5]

Commercially available meconium screening can detect metabolites of opiates, cocaine, marijuana, phencyclidine, amphetamines, and many licit drugs that may be abused. Meconium is collected from the infant's diaper for 24 to 48 hours after birth, and this pooled sample is then sent for analysis. Collecting meconium is easier than collecting neonatal urine, and the specimen may be either stored in the refrigerator or frozen before analysis.[4] The cost of this method compares favorably with routine urine drug screening. Meconium testing is often performed at regional centers, with a turnaround time of 2 to 3 days. Since this delay may result in an infant being discharged before the results of the screening are known, institutional protocol should ensure that these infants receive proper follow-up.

Since screening of meconium allows for the diagnosis of maternal drug abuse postnatally, only after the fetus has already been exposed to drugs, the clinician must rely on other methods to detect maternal drug abuse prenatally. Meconium screening is especially helpful in cases of patients who received no prenatal care, patients who refused screening during pregnancy, and patients with peripartum conditions suggesting drug use, such as abruption, preterm delivery, altered mental status, or signs of infant drug withdrawal.

Postpartum detection of maternal drug use still allows for many interventions to help the parents and protect the infant. Immediately after the birth, parents may be motivated to seek treatment for their addiction out of a desire to provide the best care for their newborn. As the child develops, the practitioner can be alert to watch for signs of abuse or neglect, as well as physical or developmental delay. Social service interventions may include visits to assess the home situation, parent education, case management to ensure appropriate utilization of services, and close tracking of the child's well-being.

The issue of informed consent for infant toxicology testing has not been definitively addressed by the courts. Testing of infants may be allowable under the general consent to treatment signed by parents at birth, providing that the testing is necessary for diagnosis and treatment of the infant's condition. Without further direction from the courts regarding this issue, it is probably wise to obtain parental consent before testing the infant. It is essential that the physician stay aware of the laws in the state regarding prenatal drug abuse. Several states mandate reporting of known prenatal drug use to child welfare authorities, and others leave reporting to the clinician's discretion based on perceived risk of future abuse or neglect.[6,7]

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Cryptic Tonsillitis

Recurrent and/or severe tonsillitis can be frustrating for the patient as well as for the physician. Many of the worst cases of tonsillitis I have seen have been in patients who had numerous tonsillar crypts filled with yellow, cheesy, foul-smelling debris.

About 6 years ago, I encountered a patient whose tonsils were severely swollen with numerous large crypts and large amounts of debris. The patient was in obvious pain. I offered to spray her throat with cetacaine just to give her some immediate relief.

That done, I decided to see what would happen if I removed some of the cryptic debris. Apparently, it made a difference. The patient called about 4 hours later to thank me. She went on to say that in all the years she had been having sore throats, she had never had relief so quickly.

The first step in this technique is to explain the procedure to the patient. The patient is warned that the material that comes from the tonsils will be foul-tasting. A warm, moist washcloth is given to the patient to wipe the debris from his or her mouth. Cetacaine is sprayed onto the tonsils and the patient is asked not to swallow for 15 seconds. This step is repeated. With a gloved hand, the index finger is used to apply mild pressure to each tonsil and then sweep each tonsil. Often this expels the larger chunks.

The patient is then placed in the sniffing position (leaning forward with chin extended as though sniffing a flower), and , with the procedure lighted directly or indirectly by means of a hand mirror, an ear curette is used to remove the debris from the tonsillar crypts. A tongue blade may be necessary to get full exposure in some patients. It is not unusual for small amounts of bloody pus to drain from crypts after removal of the debris. After clearing both tonsils, the patient is asked to gargle with cool water, and spit out the residue.

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Lidocaine Anesthesia

Kids don't like pain. One of the things they like least about stitches is the pain. I believe that the degree of pain is related to three things: placement of the needle, pressure of the infusion, and expectations of the patient.

Often-heard descriptions of the numbing process are, "I'm going to give you a shot that will numb this up," or, "This medicine will feel like a bee sting, and in a few minutes, your cut will be numb." Most kids can relate to the term "shot," "medicine,"or "bee sting" very well, and they would rather have no part of it. Forget the "numb" that comes right after it.

Instead of a technical explanation, I tell my patients that I am going to put some "stuff" in "there" that will feel "ice cold," and that after a few moments it will feel warm, and then it will not hurt at all when I fix it. Then, using the smallest needle available, I put the needle into the subcutaneous area from inside the wound rather than putting the needle through the skin. I advance the needle slowly while infusing. For distraction just before I insert the bevel, I may shake the skin if it is a loose area. If the area is not loose, I gently pinch the area just next to where I am working and insert the needle while asking, "Do you feel this little pinch over here?" As I infuse slowly, I ask, "Do you feel the icy cold stuff?" More often than not the child will answer yes.

After infusion, I assure the child that I will not begin "fixing" it (rather than "sewing," which communicates sticking with a needle) until he or she says it is OK. I test first with a blunt instrument, such as the back of the forceps, slightly away from the wound, and then I touch the edge of the wound and ask, "Can you tell me what this feels like?" When the child says, "Nothing," I explain that the area is numb so it should not hurt but that he or she might feel something a little weird, like a little pressure or pulling. I tell the child that if it feels uncomfortable, just say "Stop," and I will.

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