

PBLD – Table #21

Whose body is it anyways? A minor's dilemma.

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Objectives:

- ✓ Discuss consent versus assent in pediatric patients
- ✓ Discuss preoperative pregnancy testing in pediatric patients
- ✓ Discuss guidelines and recommendations regarding preoperative pregnancy testing in pediatric patients
- ✓ Discuss what is next if the pregnancy test comes back positive

Case:

17 years old female with Kawasaki disease presented for a scheduled CABG for giant coronary artery aneurysms. She has been followed by her cardiologist with serial routine cardiac imaging over 10 years which revealed progressive enlargement of the aneurysms. She remained asymptomatic over the years. The patient and her parents were checked in by the nurse and Child Life Specialist on the day of surgery.

Questions:

What is informed consent? What is assent? Is assent necessary? What happens when parents and minor disagree? Can minors consent for themselves if they are pregnant? What can they consent for when they are pregnant? Can they consent for the baby after he/she is born? Can they consent for themselves after giving birth? How can a minor be emancipated?

Case (continued):

She expressed anxiety over the procedure and feeling nauseous which she attributed to being anxious. Shortly after, the anesthesiology team was contacted by the nurse with a critical lab result.

Questions:

Should preoperative pregnancy testing be done routinely in pediatric patients? Is it justified? If so, what age limit should be included? If not, how do you decide who to test? What happens if the parents refuse? Can or should parents be able to sign a waiver for the patient? What happens if the patient cannot urinate? Would you proceed to perform a serum pregnancy test? What happens if the patient is a difficult venous access? Should there be exceptions? If so, what exceptions and who should decide if an exception should be made?

Are there any guidelines or recommendations available for preoperative pregnancy testing in pediatric patients? Does the literature support for or against routine testing? Why is there a lack of consistency? What is the best solution?

Case (continued):

The patient's routine urine pregnancy was positive. A repeat serum pregnancy test confirmed the diagnosis. The surgical team was notified. The patient was then escorted to a private room after the parents were told that she needed to be weighted.

The patient was given the news which came as a complete surprise to her. After a highly emotional reaction, she stated that she was scared to tell her parents. She feared their reaction to the news since they threw her out of the house when they found out that she was sexually active a year ago. She did not know what to do.

Questions:

Who should be notified if the pregnancy test comes back positive? How do you confirm the diagnosis? Do you do the urine pregnancy test again? Are you going to get a serum test to confirm? How do you break the news to the patient? What happens if the patient does not want to disclose the information to the parents? Do you break the news to the parents? Do you proceed with the planned procedure? Do you cancel the case? Does the type of case matter? Does a positive pregnancy test in a minor constitute child abuse? If so, should it be reported?

Discussion:

According to the CDC in 2012, a total of 305,388 babies were born to women aged 15-19 years in the United States alone, which is a record low for U.S. teens in this age group. This reflects a drop of 6% from 2011. Birth rates fell 8% for women aged 15-17 years and 5% for women aged 18-19 years. The exact reasons for the declines are unclear but teens may be less sexually active or more of those who are sexually active seem to be using birth control than in previous years.

Despite the decline in the teen birth rates, the current numbers are still significant which poses a real conundrum for the pediatric anesthesiologists who have to face with the decision whether to perform or not perform a preoperative pregnancy test on minors of childbearing age. This controversial subject has gone on for many years and continues to elicit debate among anesthesiologists. The practice of preoperative pregnancy testing in minors varies greatly across the country and across the continents, which ties into the issue of medicolegal rights in a minor.

From a legal standpoint informed consent is an intentional authorization for treatment given by a patient to a physician knowingly, rationally, with volition, and without coercion. Informed consent can only be given by those with legal entitlement and decisional capacity. Otherwise, a parent or guardian must provide permission given that he or she has legal responsibility and is assumed to act in the best interests of the minor. However, the best interests of the minor are hard to define and are often subjective.

State rather than federal legislation mandates policies with regard to minors' medicolegal rights. The legal age of majority in most states is 18 years of age, which is an arbitrary designation since there are minors who are competent and others of legal age who are not. However, legislation is designed to protect minors from the consequences of poor decision. Minors are viewed as incompetent decision makers with three exceptions: emancipated minors, those seeking medical treatment for certain health problems (i.e. contraception, STDs, pregnancy, alcohol and drug abuse, and psychiatric problems), and mature minors.

Emancipated minors are those who live independently of their parents and may consent to medical care or refuse it as if they were adults. The criteria for emancipation vary by state, but generally include the following situations: marriage, military service, parental consent (parents who have surrendered their rights and responsibilities), judicial order, and financial independence. Most states have statutes to determine emancipation through a judicial process and some without court involvement.

Assent is an interactive process between a minor and a physician that involves developmentally appropriate disclosures about the illness and solicitation of the minor's willingness and preferences regarding treatment. The concept of assent does not require the depth of understanding or the demonstration of reasoning ability required for informed consent. It provides minors with opportunities to gain decision-making experience within safe contexts.

There is a paucity of ethical guidelines on how to proceed should a minor refuse treatment or when there are disagreements between parents and adolescents, which reflect the lack of legal criteria governing these matters. When facing with the dilemmas of disagreements with minors,

physicians must adhere to what is moral and ethical, using their conscience, professional guidelines, and understanding of the law as guideposts. The goal is for mediation through counseling and consultation. However, legal intervention may be a last resort.

Aside from the medicolegal aspects of minors, the issue of possible fetal harm arises when discussing preoperative pregnancy testing in minors. It is generally recommended that all surgery, unless truly emergent, be postponed until after delivery to minimize the risk to the fetus. Organogenesis occurs during the first trimester. In the third trimester, there is a higher risk of premature labor. The second trimester is typically regarded as the safest time period for performing surgical procedures if necessary.

Many studies have been conducted in an attempt to more accurately assess the hazards and risks of administrations of anesthesia and of surgery during gestation. Virtually every inhalational anesthetic and drug is teratogenic to some species or another at some point in gestation under certain conditions. However, none of these agents have yet to be classified as an absolute human teratogen. The potential teratogenic effects of drugs administered and risk of premature labor, maternal hypoxia and/or acidosis, and alterations in uteroplacental blood flow during surgery definitely exist and pose a distinct risk to the fetus.

The goal of preoperative laboratory testing is to obtain pertinent information about the patient that, if abnormal, would influence the patient's management. Otherwise, these tests would be unnecessary and contribute only to increased costs and operative delays.

Determining pregnancy based solely on history and physical examination alone can be difficult. There are conflicting studies with regards to the reliability of patients' history, especially minors, in assessing pregnancy preoperatively. Menstrual cycle length is erratic in 72% of normal women (median 28–29 days (range 19–60) days), with greatest variability in the years leading up to menopause. Many women will not know the date of their last menstrual period or the precise frequency of their cycle.

Standard pregnancy tests detect hCG in the urine at a sensitivity of 20 munits/ml. They are designed to confirm pregnancy positively after a missed period rather than to exclude pregnancy at earlier points in the menstrual cycle. Using an extremely sensitive urinary hCG assay (detection limit 0.13 munits/ml), only 40% of pregnancies were detected 7 days before the expected date of next menses; 74% were detected 3 days before the expected menses; 10% of pregnancies were not detectable until after the expected date of the next menses; and 3% were detected more than 7 days after the expected menses. Quantitative serum tests for hCG provide greater sensitivity (1–2 munits/ml) than standard urinary tests, but are more expensive and still not sensitive enough to diagnose all pregnancies.

There were various studies that were conducted to look at preoperative pregnancy tests, which found that routine pregnancy testing uncovered positive findings in 0.3-2.2% of cases. In all of these cases a change in the patient's management took place.

The cost-benefit ratio of preoperative pregnancy testing is a very difficult value to assess and quantify. There are a few studies that published hospital costs of performing routine preoperative

pregnancy testing estimating a cost of > \$2500 per pregnancy identified. It is not clear how this estimate compares to an unknown but very real potential cost of an unfortunate maternal-fetal event associated with not testing.

The task force on testing for pregnancy in anesthesia constituted by the ASA concluded: “The task force recognizes patients may present for anesthesia with early undetected pregnancy. The task force also recognizes the literature is insufficient to inform patients or physicians on whether anesthesia causes harmful effects on early pregnancy. Pregnancy testing *may be offered* to female patients of child-bearing age and for whom the result would alter the patient’s management.” Thus, essentially allowing physicians and hospitals to implement their own policies and practices with regard to this and the great debate ensues.

Regardless of which policy is implemented (routine preoperative pregnancy testing, history directed pregnancy testing, or a variation of thereof), before the situation of a positive pregnancy test result arises, the legal implications, firm hospital counseling policy, the medical staff bylaws, and the availability of social workers, child-life workers, psychiatric counseling, and teen-pregnancy advisors must all be worked out in advance.

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