Comparing Cesarean Section Rates between Spain and the United States

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Introduction

During my time in Zaragoza, Spain I spent three weeks shadowing the Ob/Gyn department at Miguel Servet Maternity Hospital. The most significant difference I discovered between practice there and here in the United States was the number of cesarean sections performed annually. The specific rate of cesareans for Miguel Servet was 15%, which is less than half of the 38.3% rate in New Jersey, the highest rate in the country. Through my observations there I concluded that the two most significant reasons for this difference are the increased accessibility and readiness to perform a fetal blood pH sampling at Miguel Servet, and the nature of the patient-doctor relationship there that gives patients less autonomy over the birthing process.

Background

Throughout the month of June, 2011 I was able to shadow the Ob/Gyn department at Miguel Servet Hospital in Zaragoza, Spain. While there, I witnessed many births daily and became familiar with the typical practices that took place during the labor process. I saw that if the fetal heart rate became abnormal, the physicians routinely sampled the fetal blood pH to assess if they should continue with a vaginal delivery or not. I also spoke with the physicians who showed me the statistics for cesarean deliveries at their hospital and discussed with me their efforts to ensure that they do not perform a cesarean section unless absolutely necessary. Using this information, I researched how these specific aspects of care accounted for this large difference in cesarean rates between the two countries.

Observations

I first became aware of this large difference in the rates of cesarean deliveries between Miguel Servet and the United States after observing the labor practices and the swiftness with which the Spanish physicians perform fetal pH samplings to try and avoid a cesarean delivery. Fetal scalp blood pH measurements can be used as a tool to determine if a cesarean section is necessary. According to the NIH, a fetal blood pH less than 7.20 is considered abnormal. At Miguel Servet, it was common to test the pH level of the fetus two to three times to see if the baby's condition had improved following an abnormal heart tracing.

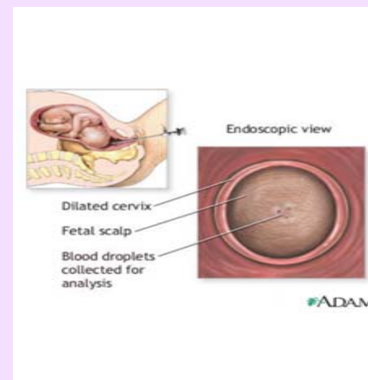
Why the difference?

According to the American College of Obstetrics and Gynecology, pH sampling kits are not readily available in the United States. Additionally, they state that questionable fetal heart tracings accounted for the majority of the 73% cesarean rate increase at Yale-New Haven Hospital over the course of 13 years. Perhaps if fetal pH samplings were performed more readily, the physicians would have concrete readings by which to direct the course of the delivery.

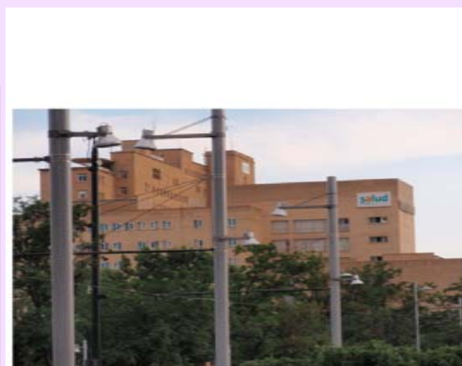
According to the American Society for Clinical Pathology, however, fetal pH samplings may in fact be unnecessary. They state that while it may give accurate readings of blood pH, simply stimulating the fetus' scalp without taking a blood sample may itself increase fetal heart rate and prove that the baby has intact autonomic function and is not acidotic.

The "medicolegal" climate, according to the American College of Obstetrics and Gynecology, may be a major factor pushing American physicians to over-utilize cesarean section with an abnormal fetal heart tracing. Fetal scalp sampling of blood pH brings extra risk of infection, and mothers fearing harm to the baby are likely to request having a cesarean section as opposed to waiting for multiple samples.

Given these circumstances, while fetal scalp sampling of blood pH may be unnecessary, taking steps to accurately assess fetal blood pH instead of relying mainly on heart tracings may avoid unnecessary cesarean sections.



Fetal Scalp pH Testing



Hospital Miguel Servet, Zaragoza, Spain

How are Spanish Patients Different?

Another aspect of Spanish healthcare that seems to be relevant to the lower number of cesarean sections is the nature of the patient-doctor relationship. Although the patients have trusting relationships with their physicians, they are not given as many opportunities for autonomy over their treatment as in the United States and are less likely to protest the physician's decisions. While in the hospital there, I noticed numerous simple practices that we do in the United States while interacting with patients that they do not do. These customs mainly have to do with the patient's personal space and privacy while in the labor process. It was not necessary there to knock on the patient's room before entering. As many as five to ten residents would enter the room at once and the patients did not typically seem overwhelmed. The residents also did not always formerly introduce themselves to their patients. Given these cultural differences, Spanish patients do not have the opportunity to request to have a cesarean section the way women in the United States do. The physicians at Miguel Servet Hospital were very adamant on only performing a cesarean section if necessary for the well-being of the fetus and mother. Perhaps since Spain does not have the same "medicolegal climate" as the United States, physicians are more willing and able to perform further testing on the fetus before performing a cesarean based solely on the fetal heart tracing.

Conclusions

The two main observations accounting for the difference in cesarean section rate in the United States and Miguel Servet Hospital in Zaragoza, Spain appear to be their abundance of fetal scalp samplings to assess blood pH secondary to abnormal heart tracings and the nature of their patient-doctor relationship. Given the "medicolegal climate" in the United States, physicians may be more apt to perform cesareans instead of waiting on further testing - especially if requested by the mother after learning the fetus may be in distress.

Patients that I observed in Zaragoza, Spain seemed to generally be more willing to oblige with the physicians' requests for further testing during the labor process. They were typically less overwhelmed throughout the experience, even when examined by the residents in large numbers. Thus, perhaps the nature of the patients' views on their doctors' role in their care account for their passivity during labor.

Sources

Barber, Emma L., et al. "Indications Contributing to the Increasing Cesarean Delivery Rate." *American College of Obstetrics and Gynecology* 118 (2011). Print.
"Fetal Scalp PH Testing: MedlinePlus Medical Encyclopedia." *National Library of Medicine - National Institutes of Health*. Web. 07 Nov. 2011. <http://www.nlm.nih.gov/medlineplus/ency/article/003408.htm>.
Henderson, Zsakeba, and Jeffrey L. Ecker. "Fetal Scalp Blood Sampling--Limited Role in Contemporary Obstetric Practice: Part II." *Laboratory Medicine* 34.8 (2003): 594-600. Print.