Identification and Management of High-Risk Pregnancy

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Obstetrics is a branch of medicine involving concurrent care of a pregnant woman and her un born baby. The continuing improvement of healthcare system of Thailand has contributed to a better outcome of pregnancy in general, according to the reports of the United Nations Children's Fund (UNICEF) on antenatal care coverage of Thai pregnant women from the year 1996 to 2004 is 92%.[1] Also, we were able to achieve 99% of a skilled attendant at delivery (by doctors, midwives, or trained personnel) during the same period of time.

Despite these impressive statistics, the latest maternal mortality ratio from the year 1990 to the year 2004 was 24 per 100,000 deliveries. This staggering number could be lowered by continuous training of the people involved in maternal health care. An experienced caregiver should be able to identify mothers who are at risk of developing problem later in pregnancy. Early recognition of the risks could result in early intervention. This can potentially improve the perinatal outcomes. However, the description of "high-risk" pregnancy is dynamic, and it is not easy to put everything in a short article without losing its context. Therefore, in this review, the author will simply provide a general idea of commonly found problems among pregnant women in Thailand.

What Is High-Risk Pregnancy?

Whenever a pregnancy poses a risk either to the mother, or to her fetus/newborn, it should be regarded as "high-risk". This is quite an indistinctive description. The author may hereby simply categorize conditions that might jeopardize the mother and her baby as follows:

Pregnancy with medical complications

Several health problems could affect the outcome of pregnancy. Perhaps the most widely known condition that concerns a number of mothers in the society where women put their career ahead of their marriage is the advanced age by the time they decide to have kids. These women are at higher risk of having a child affected with Down syndrome and other common chromosomal abnormalities. For the mother herself, certain medical complications such as hypertension and diabetes could emerge at this age, and significantly complicate the course of pregnancy.

Hypertension and diabetes mellitus are among the most common medical complications that afflict pregnant women. Many times these conditions just arise during pregnancy. Early and regular booking could allow the care providers to detect and manage these conditions properly. The sooner the intervention is employed, the better perinatal outcome is expected.

The deviation in physiologic changes during pregnant state sometimes puts the mother and her baby at risk. An alteration in the placental related hormones may lead to "transient" diabetes during pregnancy. Some women may have a new onset of proteinuric hypertension, so called preeclampsia. This condition is ranked among the first killers of the mother-to-be. Again, understanding the nature of these pregnancy-related diseases, along with vigilance in the detection of any subtle signs could help significantly reduce their sequelae, and optimize the mother's and the baby's health.

Pregnancy with obstetric complications

Any pregnancy that does not involve one mother per one child should be considered abnormal. A mother bearing multifetal gestation, which is associated with artificial reproductive technologies, can have a bumpy course of pregnancy. Excessive fluid retention, preeclampsia, gestataional diabetes, and preterm delivery are common complications that could follow.

Abnormal placentation, such as placenta previa or placenta accreta, could result in an excessive hemorrhage at the time of delivery. Mothers who have previous uterine scaring or disruptive endometrial lining are at risk of developing these conditions. Prenatal scanning will help identify the location and structure of the placenta prior to the onset of labor. Early recognition of these conditions will allow a better optimization of the mother's condition, and a better preparation to manage with an excessive peripartum bleeding.

Pregnancy with certain genetic conditions

Genetic aberrations are more and more likely to be found in women of child-bearing age, thanks to the population awareness and the advancement of new technologies. Many couples opted for having certain genetic disease screening and counseling to learn about their risk of giving birth to an affected child. In the Southeast Asian region, including Thailand, thalassemia and hemoglobinopathies are common. Affected individuals have an anomalous hemoglobin chain synthesis, resulting in severe, and transfusion dependent anemia. Couples who found themselves carrying this recessive gene could opt for pre-

implantation or prenatal genetic diagnosis. Adoption is always an option for a couple carrying genetic mutation with potentially serious outcomes for their genetic offspring.

For other inherited diseases, it is a rule that if there is any affected individual in the family, genetic consultation should be considered. Now we are able to detect many commonly found mutations, therefore counseling could be carried out with more confidence.

What are the strategies to minimize the impact?

Regardless of how advanced the technologies are, the "touch" is always the key, rather than the "tech". Attentive premarital and prenatal care is of paramount importance in detecting pregnancy at risk. Careful history taking and comprehensive physical examination shall not be forgotten in order to reveal the "clinical" risks. The author wants to reiterate the importance of early bookings. The earlier the problems detected, the more likely we can prevent the devastating outcomes.

When suspicion arises, several screening tools are available. Serum and ultrasound markers could help the physicians to determine the risk of their patients in a more objective fashion. Specialists in many fields of medicine may be required in a complicated case.

Summary

Taking care of pregnant women is a job every practitioner should get accustomed to. A good physician should be able to identify women who are likely to develop complications, either on herself or her baby. A treatment, or an appropriate consultation in a complicated case, should be carried on without delay. Distributing public knowledge will help women take a better care for themselves, and that should make our job as a physician easier. Judicious use of technologies accordingly to the availability of local resources is an art. All in all, these strategies are aiming toward the improvement of our mother's and child's health.

REFERENCES

1. UNICEF, 2005. Health statistics at a glance: Thailand (online). Available from: *http://www.unicef.org/infobycountry/Thailand_statistics.html* (Access on March 8, 2006).