Women's Health: Pregnancy and Childbirth

Introductory Remarks

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Snyopsis

Vaccines may be useful in pregnancy to reduce neonatal risk of infection. Childhood immunization decreases the risk of maternal exposure and infection which may result in time lost at work and school. It also can decrease problems in fetal development.

In considering infection and disease, one must be aware that the number of organisms that may affect the outcomes of pregnancy is large and the types of infections are diverse. In addition, although many specific and nonspecific therapies are available, therapy for all of these infections is not available, Such is the case, for example, for some of the group B infections, particularly streptococcal diseases, which are at the point where antibiotics are no longer useful in the infant. Thus, one of the major goals of prenatal, perinantal, and child care is the prevention of infections.

A few but not all of these illnesses can be modified and prevented by the appropriate use of vaccines and immunoglobulins for passive immunization. A variety of advisory groups have specifically addressed the question of the use of vaccines in pregnancy and given specific recommendations for currently licensed products.

All health care providers recognize that there must be a significant demonstrated need before administering any vaccine during pregnancy, and professionals should consult these sources as well as those addressing immunization of children and adults in general. The sources include the various recommendations of the Immunization Practices Advisory Committee of the Surgeon General, the recommendations of the Committee on Immunization of the American College of Physicians (their guide for adult immunization), and the report of the Committee on Infectious Diseases of the Academy of Pediatrics. In addition, the Amercian College of Obstetrics and Gynecology issues technical bulletins on immunization during pregnancy.

Patients should discuss with their physicians the rationale and the risk of immunizations and review the contraindications for each vaccine because they vary from product to product.

It is important to promote immunization so that we can protect pregnant women. Most persons are aware of the contributions to the health of the community that rubella vaccine has made since its introduction in 1969. Previously, maternal rubella during development of the fetus was a significant cause of mental retardation. Now immunization can occur before pregnancy, for no live viral vaccine should be administered during pregnancy.

Other vaccines can be expected to impinge upon mental retardation and other illness in the future, such as the new *Haemophilus influenza* vaccines. Not only are *H. influenza* vaccines and group B streptococcal vaccines being considered for experimental use in pregnancy, but many others can be expected to follow because of the success with the use of tetanus toxoid during pregnancy for the prevention of neonatal tetanus.

The best way to prevent putting a mother at risk during pregnancy is to make sure that all children are immunized at the appropriate age. In addition to protecting the mother, the use of appropriate childhood immunizations affects us all: children bear no burden of disease, or at least a reduced disease burden, and therefore, these children can remain in school and their mothers can go to work or remain at

home rather than taking care of ill children.

The day will surely come, sooner than most of us ever dreamed, for a large number of infections to be conquered, such as *Escherichia coli* infections or other causes of gastrointestinal tract diseases, because biotechnology is providing new approaches to identify important immunogens and antigens. Those immunogens and antigens can be produced and administered more safely to pregnant women.

New and unique routes of administration can be developed. A whole new field of health protection awaits discovery.

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Progress on Key Issues in Maternal Nutrition

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Synopsis

Great progress on key issues in maternal nutrition has been made in the past few years, mainly because of the legislative requirements of the U.S. Department of Agriculture's Special Supplemental Food Program for Women, Infants, and Children (WIC Program). These advances are most timely because of the general recognition that, in this period of finite resources, we will need to make optimal use of resources such as the food package, nutrition education, and health services that together make up the WIC Program benefits.

Major progress has been made in the following critical areas: (a) agreement on nutritional risk criteria; (b) identification of dietary risk factors; (c) increased availability of a variety of computer-assisted techniques for collecting, managing, and analyzing dietary intakes on large numbers of patients; and (d) recognition of the need for and availability of a variety of alternative dietary standards in the provision of overall services to pregnant women.

Of even greater importance is the recognition that we can no longer treat nutrition as a single variable, independent of the many other forces that together influence the course and outcome of a pregnancy. Rather, we recognize that there is a seamless web of influences, all of which need to be taken into account in attempts to provide for the needs of pregnant women at risk of poor pregnancy outcomes.

The timely application of all of these advances will greatly facilitate a more efficient and effective use of resources such as are provided by the WIC Program. They will also provide both the patients and their health care providers with more realistic expectations of what might be accomplished towards improving the outcomes of pregnancies at nutritional risk.

THE CHALLENGE WE FACE now is the same one we had 25 years ago, that is infant mortality and how to explain the fact that in the United States infant mortality is higher than in France, Japan, and Scandinavia. One of our objectives for the nation is to reduce infant mortality by 1990 to a level that Japan had achieved 10 years ago.

The specific reduction that we hope to achieve is an infant mortality rate of fewer than 9 deaths per 1,000 live births. Two-thirds of the infant deaths come from the 7 percent of low-birth-weight babies. The issue ultimately becomes then, can we improve birth weights?

When this issue was first raised in the 1960s, there were serious questions such as "Does prenatal care matter?" Then within that question were others about "What is prenatal care?" and, more to our point here, "What is the role of nutrition?" What brought all of this into focus was the coming of the WIC Program (Supplemental Food Program for Women, Infants, and Children) in 1972.

The WIC Program for the first time presented a resource that the health provider could use to meet a dietary deficit when one was identified. But two unusual provisions written into the original WIC legislation set the stage for much of the progress that has followed on nutritional services as part of prenatal care.

The first provision called for the Secretary of Agriculture to report to the Congress on the medical benefits of the supplemental food. Until the WIC Program, it was just considered a good idea to feed pregnant women, and it was not necessary to prove that it was beneficial. This was the first time that we in maternity services were required to show that what we did mattered.