State of Alaska Epidemiology Bulletin

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Bulletin No. 10
August 1, 1986

Rubella Vaccination During Pregnancy

Rubella vaccination of all susceptible women of childbearing age is strongly recommended to prevent the occurrence of congenital rubella syndrome (CRS). Among women of childbearing age, 14-15% remain susceptible to rubella. Emphasis is on vaccinating women who could potentially become pregnant. Concern has been expressed about the theoretical risk to the fetus if a woman is inadvertently vaccinated during pregnancy.

Since 1971, the Centers for Disease Control has maintained a registry to monitor the risks to the fetus following exposure to attenuated rubella vaccine virus. Fortunately, the results continue to be reassuring. (1)

Pregnancy outcomes for 614 recipients of RA 27/3 vaccine - United States, January 1979 through December 1985

Prevaccination immunity status	Total women	Live Births	Spontaneous abortions and stillbirths	Induced Abortions	Outcome unknown
Susceptible	203	155[1]	8	30	12
Immune	32	30	1	0	1
Unknown	379	320[2]	8	24	28
Total	614	505	17	54	41

[1] Includes two twin births
[2] Includes one twin birth

Since the licensure of RA27/3 rubella vaccine in January, 1979, CDC has identified 614 women who received this vaccine during pregnancy. Of the 505 infants known to be born to these women, all were free of defects compatible with CRS.

Of the 153 women known to be susceptible, 53 (35%) were vaccinated with rubella vaccine during the highest-risk period for fetal infection and congenital defects (1 week before to 4 weeks after conception). None of their infants were born with CRS.

Of the 155 infants born to mothers who were susceptible at time of vaccination, 121 (78%) were serologically tested after birth. None had clear serologic evidence of intrauterine rubella virus infection.

Of the 320 infants born to mothers whose immune status was unknown at time of immunization, 156 (49%) were serologically tested. Two had serological evidence of intrauterine infection. Both were clinically normal.

No CRS-like defects have been noted in infants born to mothers vaccinated during pregnancy. However, the rubella vaccine virus can cross the placenta and infect the fetus. Rubella virus was isolated from the products of conception from 1 of 34 (3%) women who had abortions after receiving RA27/3 vaccine during pregnancy.

Recommendations

The Division of Public Health continues to recommend that all physicians and health departments strongly encourage women of childbearing age who are not known to be immune to receive rubella vaccine. Pregnancy remains a contraindication to rubella vaccine because of the theoretical risk of CRS. Reasonable precautions should be taken to preclude vaccination of pregnant women, including asking women if they are pregnant, excluding those who say they are, and explaining the theoretical risks to the others: If vaccination does occur within 3 months before or after conception, the risk of CRS is so small as to be negligible. Rubella vaccination of a pregnant woman should not ordinarily be a reason to consider interruption of pregnancy.

References

(1) Centers for Disease Control: Rubella vaccination during pregnancy - United States 1971-1985. MMWR 1986; 35:275-276, 281-284.

(Contributed by Michael Klatt, Immunization Program Manager, Section of Communicable Disease Control, Division of Public Health.)