Knowledge, attitude and practice on maternal immunization with tetanus toxoid, reduced diphtheria toxoid, acellular pertussis (Tdap) among pregnant women in Korea

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Purpose

In South Korea, the number of cases of pertussis reported has increased in recent years. Despite effectiveness of maternal tetanus toxoid, reduced diphtheria toxoid, acellular pertussis (Tdap) vaccination, immunization rates of Tdap during pregnancy remain quite low. We assessed the knowledge, attitude and practice on maternal Tdap vaccination among pregnant women.

Methods

This study was a cross-sectional survey of pregnant women who visited obstetrics and gynecologic units in the Gyeonggi-do province of Korea. Individual questionnaires were administered to assess knowledge, attitude and practice on maternal immunization with Tdap.

Results

The questionnaires was completed by 184 pregnant women; 158 (86%) had not received information from doctors about pertussis and Tdap, and 166 (90%) did not know the need for Tdap vaccination. Only 7% of pregnant women unlikely to receive Tdap vaccine during current pregnancy answered 3 or more of the 5 knowledge-based questions correctly (Table 1, Fig. 1). By logistic regression analysis, recommendation by doctor (OR 236.2), belief that the vaccine is effective (OR 40.21), and belief that the vaccine is safe (OR 19.83) were significantly important factors to respondents' intention to be vaccinated (Table 2).

Conclusions

Most pregnant women seem to be neither recommended nor adequately informed about Tdap vaccination. Information given by health care professionals is very important to increase Tdap coverage among pregnant women.

Key Words: pertussis, immunization, pregnancy, attitude

Table 1. Maternal Characteristics and Associations with Intention to Receive Antenatal Tdap Vaccines

Characteristics	Likely to receive Tdap vaccine during current pregnancy (n=18)	Unlikely to receive Tdap vaccine during current pregnancy (n=166)	P value
Age (years), mean	33	32	0.734
Gestational age(weeks), mean	27	28	0.451
Primiparous (%)	28	56	0.026
Knowledge score ≥60% (%)*	61	7	<0.001

* Proportion of respondents who answered 3 or more of the 5 knowledge-based questions correctly.
Tdap, tetanus toxoid, reduced diphtheria toxoid, acellular pertussis.

Fig. 1. Comparison of proportion of respondents answered correctly among pregnant women who intended to receive Tdap (tetanus toxoid, reduced diphtheria toxoid, acellular pertussis) vaccine during pregnancy versus those who did not intend to receive it.

Table 2. Factors Associated with Intention to Receive Antenatal Tdap Vaccines Tdap, tetanus toxoid, reduced diphtheria toxoid, acellular pertussis.

Variables	OR	95% CI	P value
Recommendation by doctor	236.2	12.6, 4431.9	<0.001
Belief that the vaccine is effective	40.21	2.35, 687.7	0.011
Belief that the vaccine is safe	19.83	1.54, 255.9	0.022
Cost of vaccine	1.27	0.002, 683.9	0.942

Tdap, tetanus toxoid, reduced diphtheria toxoid, acellular pertussis.