**ABSTRACT**

Objectives
Based on previous reports it is likely that the quantity of serum antibodies to HPV is responsible for recurrence of RRP disease. We carried out Gardasil® vaccination in adult men with RRP. The purpose was to examine whether or not it effectively inhibited recurrence. As a first report, we describe the antibody titers before and after vaccination.

Methods
The subjects were 12 HPV-positive RRP men. Their ages ranged from 32–74 years. Eleven of the subjects were HPV-6 positive, and one was HPV-11 positive. Gardasil® was injected three times. Serum was collected before and 7 months after the first injection, and the HPV antibody titer was measured. Antibody responses and the proportion of participants seroconverting for vaccine type epitope-specific neutralizing anti-HPV antibodies were analyzed with a competitive Luminex-based immunoassay.

Results
The HPV-6 antibody titer before vaccination was 13 and 21 mMU/mL in one patient each, and at or below the minimum limit of 11 mMU/mL in all others. After vaccination the titers rose to 139–2070 mMU/mL. The HPV-11 antibody titer before vaccination was 9 mMU/mL in one patient, but all others were 8 mMU/mL or below. After vaccination, it rose to 137–1600 mMU/mL, with a mean value of 687.6 mMU/mL. HPV-16 and 18 rose similarly. The HPV-16 antibody titer before vaccination was at or below the minimum limit of 11 mMU/mL in all cases. After vaccination it rose to 722–9356, with a mean value of 3167.1 mMU/mL. The HPV-18 antibody titer before vaccination was at or below the minimum limit of 10 mMU/mL in all cases. After vaccination the titers rose to 38–1239, with a mean value of 504.2 mMU/mL.

Conclusion
Before the vaccination, serum HPV-6 / -11 antibody titer was very low. At 7 months after the start of vaccination it had risen significantly.

**METHODS AND SUBJECTS**

Subjects
The subjects were 12 HPV-positive RLP men who were examined at the Department of Otorhinolaryngology, Nihon University Hospital and gave written consent for participation in this study. Their ages ranged from 32–74 years, with a mean age of 47.9 years. HPV infection was determined by an HPV-DNA test using liquid-phase hybridization [7-9] or a consensus primer-directed polymerase chain reaction (PCR) system [10]. Seven of the subjects were HPV-6 positive, and one was HPV-11 positive.

**RESULTS**

The HPV-6 antibody titer before vaccination was 13 and 21 mMU/mL in one patient each, and at or below the minimum limit of 11 mMU/mL in all others. After vaccination the titers rose to 139–2070 mMU/mL, with a mean value of 597.3 mMU/mL. The HPV-11 antibody titer before vaccination was 9 mMU/mL in one patient, but all others were 8 mMU/mL or below. After vaccination, it rose to 137–1600 mMU/mL, with a mean value of 687.6 mMU/mL. HPV-16 and 18 rose similarly. The HPV-16 antibody titer before vaccination was at or below the minimum limit of 11 mMU/mL in all cases. After vaccination it rose to 722–9356, with a mean value of 3167.1 mMU/mL. The HPV-18 antibody titer before vaccination was at or below the minimum limit of 10 mMU/mL in all cases. After vaccination the titers rose to 38–1239, with a mean value of 504.2 mMU/mL.

**REFERENCES**