Simultaneous administration of influenza vaccine and pneumococcal vaccine can facilitate immunization against both pathogens, particularly in populations having difficulty reaching clinics and hospitals. In the 2015/2016 season, quadrivalent influenza vaccine was introduced in Japan instead of trivalent influenza vaccine. To determine whether simultaneous administration of influenza and pneumococcal vaccine is as safe and effective as administering either vaccine alone, we compared the antibody response and adverse reactions in groups receiving the two vaccines simultaneously and individually.

This is the first study to evaluate the immunity and safety of simultaneous administration of quadrivalent influenza and 23-valent pneumococcal vaccines.

**Methods**

**Study Design**

Randomized, non-inferiority, open-label trial was conducted at the Kameda Medical Center, Chiba, Japan, from October 2015 to August 2016.

**Hypothesis**

We hypothesized that the response rate (±2-fold increase in IgG concentrations at 6 weeks after administration of PRP23) of simultaneous administration of the two vaccines is not inferior to that of separate administration.

**Inclusion criteria**

- Adults aged 18-90 years who had not received pneumococcal vaccine and quadrivalent influenza vaccine in the 2015/2016 season.

**Exclusion criteria**

- Presence of malignant disease.
- History of splenectomy.
- Bone marrow transplantation.
- Patients with severe immune dysfunction.
- Patients suffering from other requiring antibodies or serum within the past month.

**Primary and secondary endpoints**

- Responders (positive antibody response in serotype 23F of pneumococcal vaccine).
- Seroresponse (serum IgG titer ≥1:10).

**Statistical analysis**

- Continuous variables were compared using Student’s t-test or Wilcoxon rank-sum test.
- Categorical variables were compared using chi-square test or Fisher’s exact test.

**Simultaneous administration of the influenza vaccine and pneumococcal vaccine can facilitate immunization against both pathogens, particularly in populations having difficulty reaching clinics and hospitals.**