Karima Abdullah.

Changes in anti-spike IgG in HD patients who received a single dose of ChAdOx1 and who recovered from COVID-19.

**TH-PO925**

The Safety and Humoral Response to COVID-19 Vaccination in Peritoneal Dialysis Patients

Cheng-Hsu Chen,1,2 Chia-Yu Shih,1 Division of Nephrology, Department of Internal Medicine, Taichung Veterans General Hospital, Taichung, Taiwan; 2Department of Post-Baccalaureate Medicine, College of Medicine, National Chung Hsing University, Taichung, Taiwan.

**Background:** The battle between human and COVID-19 since 2019, it is highly contagious and fatal disease with poor outcome in dialysis patients. The viral vector AZD1222 is a replication deficient simian adenovirus-vector encoded SARS-CoV-2 spike protein. The efficacy and safety of AZD1222 in patients treated with peritoneal dialysis (PD) is still not knowing. We focused their seroresponse of nAb titers against SARS-CoV-2 and their local and systemic adverse effects.

**Methods:** We conducted this study to elucidate the immune response directed against SARS-CoV-2 spike (S) protein antigen and adverse effect to vaccination with AZD1222 in PD patients after their 1st and 2nd shots. There were 205 out of 263 PD patients who recovered from COVID-19.

**Results:** The first and second doses of AZD1222 vaccine 13 (9.1%) and 93 (65.0%) of 143 PD patients seroconverted with anti-SARS-CoV-2 S antibody titers (>50 U/mL), and titers presented with 188.54 U/mL (mean; IQR 54.7-739.6) and significantly increased to 1545.3 U/mL (mean; IQR 52.0-38460), respectively. Pain was the most common local adverse event (AE) (75%). Systemic AEs occurring after the first dose were mostly fatigue (41%) and headache (31%). One severe AE were reported as hearing loss and stroke after the first injection. After the second dose, the most common systemic AEs were fatigue (40.5%), headache (22.5%), joint pain (20%), myalgia (17.5%) and fever (16%), but no severe AE reported. Patients with higher antibody titers after the first dose tended to have higher antibody titers after the second dose (p<1.2×10^−10).

**Conclusions:** Our study concludes that significantly increasing humoral responses to AZD1222 vaccination in PD patients are from 9.1% after 1st shot and 65% after 2nd shot. While acceptable local and systemic adverse events, viral vector AZD1222 is still safe and effective vaccination for PD patients.

**TH-PO924**

ChAdOx1 nCoV-19 Immunogenicity and Immunological Response Following COVID-19 Infection in Patients Receiving Maintenance Hemodialysis

Krit Pongpisut,1,2 Wisit Prathitsirikul,1 Tanawin Nopsophon,1 Phanupong Phutrakool,1 Piyawat Kantagowit,1 Anan Jongkaewwattana,1 Chulalongkorn University Faculty of Medicine, Bangkok, Thailand; 2Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD; 3Infectious Disease Institute, Nonthaburi, Thailand; 4National Center of Genetic Engineering and Biotechnology, Pathum Thani, Thailand.

**Background:** This study aimed to evaluate the immunogenicity of two doses of ChAdOx1 nCoV-19 and the immune response post-COVID-19 infection in ESRD with HD patients.

**Methods:** The blood samples were obtained at baseline, 1-month, and 3-month follow-up after each shot or recovery. All participants were measured for anti-spike IgG by the ELISA method using Euroimmun.

**Results:** This study found a significant increase in anti-spike IgG after 1 month of two-shot ChAdOx1 nCoV-19 vaccination, followed by a significant decrease after 3 months. While acceptable local and systemic adverse events, the antiserum IgG was maintained in the post-recovery group. There was no significant difference in the change of anti-spike IgG between one-shot ChAdOx1 nCoV-19 vaccinated and post-recovery groups for both 1-month and 3-month follow-ups. The seroconversion rate for the vaccinated group was 60.32% at one-month after one-shot vaccination, which slightly dropped to 58.73% at 3-month follow-up, then was 92.06% at one-month after two-shot vaccination and reduced to 82.26% at 3-month follow-up. For the recovered group, the seroconversion rate was 95.65% at one-month post-recovery and 92.50% at 3-month follow-up.

**Conclusions:** This study established the immunogenicity of two-shot ChAdOx1 nCoV-19 in ESRD patients with HD for humoral immunity. After COVID-19 infection, the humoral immune response was strong and could be maintained for at least three months.

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