Immune Response after 2 doses of Vaccine against Severe Acute Respiratory Syndrome Corona Virus 2 (SARS Cov-2) Infection among Patients of Renal Transplantation

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Disclosure: None

Background: **Renal transplant (RTx) recipients have been identified as a high-risk group who are at increased risk of morbidity and mortality from Severe Acute Respiratory Syndrome Corona Virus 2 (SARS Cov-2) or COVID-19infection**

There are mixed reports on vaccine response against COVID-19 in RRT

Aim: **Hence, this study was conducted to observe the immune response after two doses of vaccine against COVID-19 in a resource poor situation among a group of RTx recipients.**

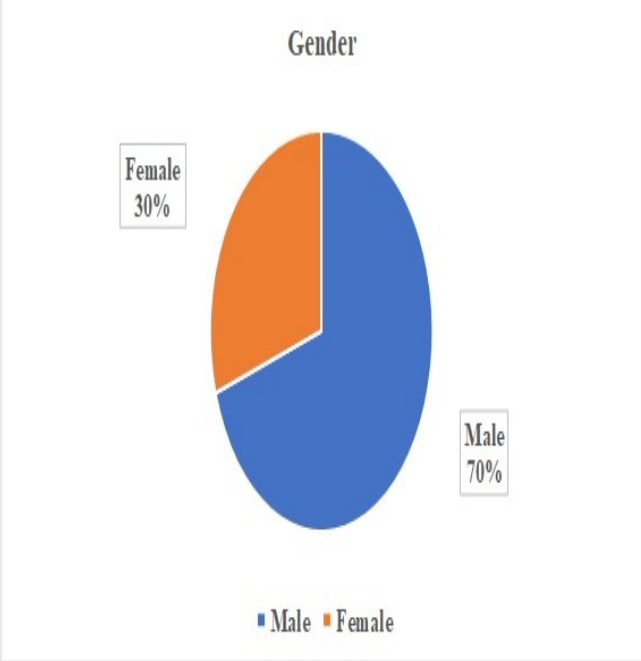
Methodology

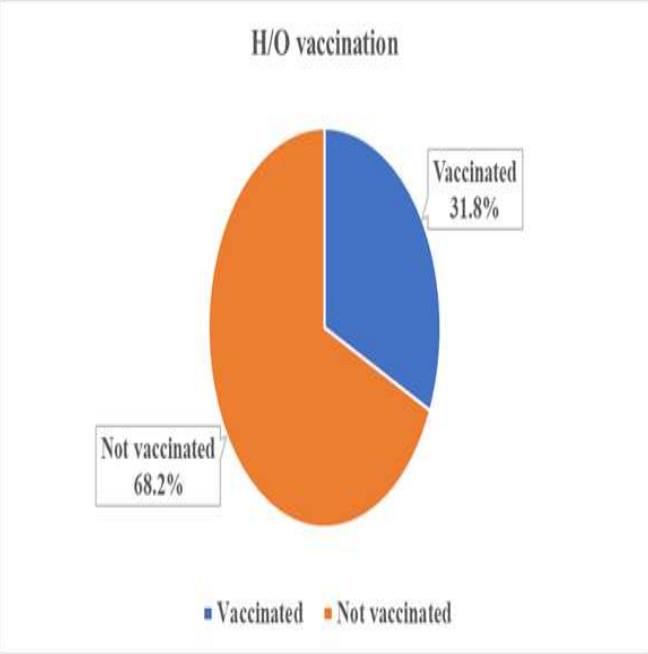
- **Data is presented from 2 transplant centres at early 2022.**
- **Total 73 renal transplant recipients (RTX) were included**
- **The RTX patients were from non-profit hospitals**
- **COVID-19 infection was based on WHO criterion**
- **Quantitative measurement of IgG antibody against (S) protein of SARS-Cov-2**
- **Test done by CMIA developed by Abbott**
- **A value of IgG against S protein ≥50 AIU/L considered as positive response**

Results:

- **The proportion of vaccinated recipients was 32%**
- **The mean age was 35±8 years**
- **CKD duration 10±3 years & dialysis duration 12±8 months**
- **BMI 24±4 kg/m^2; Hgb 13±2 g%; S Albumin 3.2±0.4 g% & S Cr 1.3±0.9 mg%**
- **IgG against S protein, was 2836±4227 AIU/L (irrespective of vaccination)**
- **A positive immune response in vaccinated RTx subjects was 100%**
- **On the other hand, a positive titer was also present in non-vaccinated 94%**

Figure: Distribution of Gender, Vaccination status and Positive IgG titer





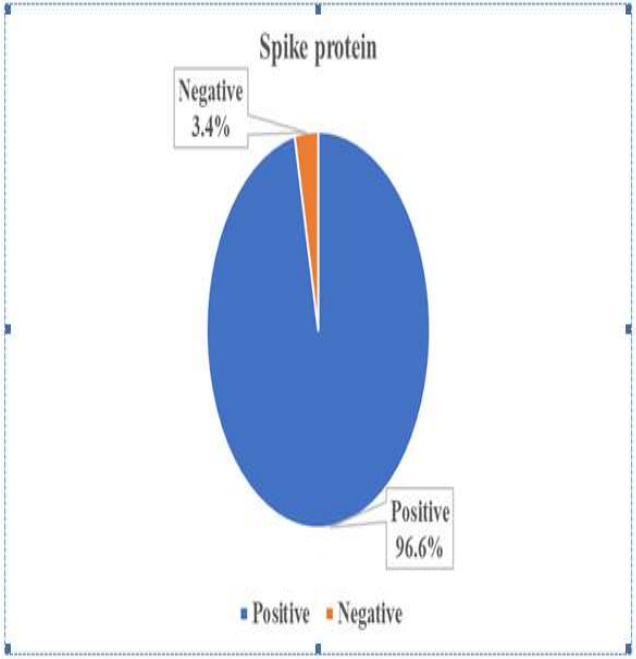


Table: Comparing between Vaccinated vs. Non-vaccinated RTx groups

	Vaccinated	Non-vaccinated	*p*
Age	35±8	34±8	NS
RTX Duration (months)	15±14	18±25	NS
BMI (kg/m2)	25±4	24±4	NS
Hgb (g%)	13±2	13±1	NS
S Cr (mg%)	1.3±0.9	1.3±0.9	NS
IgG (Anti-S) AIU/L	4818±8533	3122±6713	NS

Conclusion:

- **In this study positive immune response with high titre was seen in most transplant subjects after two dose vaccination against CODID-19**

- **At the same time the non-vaccinated subjects also showed a positive titre in nearly 95% indicating acquired passive immunity in them**

- **Renal transplant patients most likely were exposed to high infection environment evident from a raised titer in all**

- **The better renal function in both groups could be related to the strong anti-covid titter prevailing in them**

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