Comparison of SARS-COVID 2-Vaccine in patients with cardiovascular disease

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BACKGROUND

Numerous coronavirus disease 2019 vaccines have been developed, and in various stages of development. In the USA, two highly effective mRNA coronavirus disease 2019 (COVID-19) vaccines from Pfizer-BioNTech and Moderna have been approved for prevention of COVID 19 infection in addition to the Johnson and Johnson vaccine.

It is unclear if any particular vaccine has more favorable side effects profile in cardiovascular patients. Data regarding safety of COVID vaccines in cardiovascular patients is limited.

AIM

Clinical experience of SARS-COVID 2 vaccines in patients with cardiovascular disease.

METHODS

Patients with cardiovascular disease were given a questionnaire form of symptoms to fill out in an outpatient clinic setting.

Symptoms were classified as minor requiring no further medical attention and major requiring medical care by a healthcare professional.

Duration of symptoms were classified as short term if symptoms lasted less than 24 hours, medium term if symptoms lasted 1 to 7 days and long term if symptoms lasted for over 7 days.

LIMITATIONS

- Small Numbers
- Limited data on J&J Vaccine

DISCLOSURE INFORMATION

Authors don't have any disclosures to report

RESULTS

A total of 330 patients were included in the study of which 67% received Moderna vaccine 28% Pfizer and 5% Johnson and Johnson vaccine. Clinical characteristics were comparable in 3 groups with a mean age of 70 years in the study population.

Side effects were more common with Moderna vaccine 50% in comparison to Pfizer 44% and 35% with Johnson and Johnson vaccine. Most common symptoms were local site skin reaction, fatigue and muscle pain. Pfizer group had less muscle pain 17% versus 24% and 25% in J&J and Moderna group respectively. Loss of taste and smell was prevalent in 2% of study population.

Skin site reaction and fatigue were more common with Moderna group 21% and 25% respectively. Symptoms of dyspnea and headache was similar in three groups. Symptoms lasted (1-7 days) in 4%, 5%, 6% in Moderna, Pfizer and J&J group respectively. Symptoms lasting greater than 7 days was 1% in study population.

Two patients had developed blood clots with one patient diagnosed with pulmonary embolism requiring admission to the hospital after Pfizer vaccine and another patient after Moderna vaccine diagnosed with leg DVT treated outpatient. Patient were recommended against the booster dose of vaccine.

Table 1. Clinical Characteristics (n=330)

Vaccine	Moderna (%)	Pfizer (%)	J&J (%)
Total (n=330)	221	92	17
Mean age (years)	72.6	68.4	69.7
Male	52.9	55.4	52.9
Female	47.1	44.6	47.1
CAD	41.2	37.0	29.4
HTN	67.0	59.8	64.7
CHF	16.3	15.2	11.8
DM	21.3	22.8	23.5
Arrythmia	30.8	30.4	41.2
Stroke	6.3	4.3	5.9
COVID 19 Infection	14.0	13.0	35.3

Table 2. Clinical Symptoms

Vaccine	Moderna (%)	Pfizer (%)	J&J (%)
Total (n=330)	221	92	17
Any symptoms %	50	43.5	35.3
Muscle pain	24.9	17.4	23.5
Skin site reaction	21.3	17.4	11.8
Fatigue	25.3	15.2	17.6
Headache	14.9	15.2	11.8
Dyspnea	7.2	8.7	5.9
chest pain	4.1	6.5	0
Dizziness	3.2	5.4	0
Palpitation	4.1	3.3	5.9
Congestion	2.3	4.3	5.9
Loss of taste	2.3	2.2	5.9
Sore Throat	2.7	3.3	0
Nausea/vomiting	2.7	3.3	0
Diarrhea	2.3	4.3	0
Loss of smell	0.9	2.2	5.9
Pulmonary embolism/DVT	0.5	1.1	0

CONCLUSION

COVID Vaccines are safe in patients with cardiovascular disease with infrequent serious side effects.