Editorial

COVID-19 and its Vaccine- an editorial

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Coronavirus disease-2019 (COVID- 19) was first detected in Hubei Province, the People's Republic of China in December 2019 and is caused by SARS-CoV-2. The virus has since spreaded globally rapidly and is rising exponentially across the globe; so that World Health Organization (WHO) declared COVID- 19 pandemic on 11th March 2020.

Till the writing of the editorial, total 107,179,301 cases are detected and it tolls 2,341,521 death worldwide and in Bangladesh 538,765 cases are identified and it costs 8,229 life.

The world is in the midst of a COVID-19 pandemic. Till now there is no effective treatment of this disease; what we have that is a magic tool- vaccine.

A COVID-19 vaccine is a vaccine intended to provide acquired immunity against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Normally, it takes 7-10 years to develop a vaccine. With rapid response of WHO and partners i.e. scientists, pharmaceuticals and social workers, it becomes possible to develop safe and effective vaccines within this short period.

As of December 2020, there are over 200 vaccine candidates for COVID-19 being developed. As of February 2021, 66 vaccine candidates are in clinical research, including 17 in Phase I trials, 23 in Phase I–II trials, 6 in Phase II trials, and 20 in Phase III trials.[1]

In Phase III trials, several COVID-19 vaccines show 95% efficacy in preventing symptomatic COVID-19 infections. Ten vaccines are authorized by at least one national regulatory authority for public use: two RNA vaccines (the Pfizer–BioNTech vaccine and the Moderna vaccine), four conventional inactivated vaccines (BBIBP-CorV from Sinopharm, BBV152 from Bharat Biotech, CoronaVac from Sinovac, and WIBP from Sinopharm), three viral vector vaccines (Sputnik V from the Gamaleya Research Institute, the Oxford–AstraZeneca vaccine, and Ad5-nCoV from CanSino Biologics), and one peptide vaccine (EpiVacCorona from the Vector Institute).[1]

The COVID-19 vaccine is given as an injection into upper arm. It is given as 2 doses, the 2nd dose 3 to 12 weeks after having the 1st dose. There may be some pain at the site of injection, tiredness and headache; most side effects of the COVID-19 vaccine are mild and should not last longer than a week. Millions of people have been given a COVID-19 vaccine and reports of serious side effects, such as allergic reactions, have been very rare; it should be avoided if history of severe allergic reaction to vaccines or injections in the past. No long-term complications have been reported.

Bangladesh launched a nationwide COVID-19 vaccination drive with the Oxford University-AstraZeneca vaccine on Sunday 7th February, aiming to inoculate 3.5 million people in the first month. More than 31,000 people were vaccinated

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on Day 1 with no reports of any major adverse side-effects from anywhere in Bangladesh.

Now, Question is - will COVID-19 vaccines provide long-term protection?

It's too early to know and claim if COVID-19 vaccines will either provide long-term protection or not but at present it is claimed to protect for 6-8 months after a booster vaccination. This is an assumption and based on the available data suggesting that most of those people who recover from COVID-19 develop a protective antibody titres and cellular immune response which provides protection from re-infection for 6-8 months.[2]

With the hope of prevention of COVID-19, everybody should take the vaccine as well as maintain social distancing, frequent hand washing, wearing mask and avoiding social gathering till the eradication of the disease.

REFERENCES:

1. "COVID-19 vaccine development pipeline (Refresh URL to update)" (https://vac-lshtm.shinyapps.io/ncov_vaccine_landscape/). Vaccine Centre, London School of Hygiene and Tropical Medicine. 18 January 2021. Retrieved 18 January 2021.
2. https://www.gavi.org/vaccineswork/natural-immunity-covid-19-may-be-long-lasting.