



EDITORIAL

Coronavirus vaccines will save 2021? “Light at the end of the tunnel”

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On 11 March, the WHO confirmed coronavirus disease 2019 as a pandemic. The Director-General of the WHO called on governments to change its course by taking "urgent and aggressive action" (1). In terms of the number of deaths COVID-19 has caused 1.919.126 deaths, reported to WHO as of January 10, 2021. (<https://covid19.who.int>).

The COVID-19 pandemic has posed unprecedented challenges to healthcare worldwide, including neurosurgical units. Medical workers, pediatric neurosurgeons included, should be aware of safety measures and follow the recommendations of local healthcare organizations to prevent and control the disease (2).

During the year 2020 the scientific community worked tirelessly in search of a solution to stop the COVID-19. Several scientific studies have been published analyzing the effects of different drugs on the stages of COVID-19. However, in an unprecedented way in history independent groups have produced different options for vaccines against coronavirus (3).

The vaccination rollout comes with a mixed bag of emotions and hope. We cannot celebrate yet, but it is certainly a relief to start the year 2021 with the hope of COVID-19 control. A terrible disease that has been



producing lethal effects and sequelae in different peoples around the world.

COVID-19 has exposed vulnerabilities, magnified weaknesses, and exacerbated long-festering issues. We will continue to believe in science and overcome this terrible obstacle in our lives.

It's the light at the end of the tunnel. We're not there yet, but it's a big relief to know there can be an end to this pandemic.

References

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VACINAS COVID - 19	Pfizer/ BioNTech BNT162b2	Moderna mRNA-1273	AstraZeneca/ Oxford ChAdOx1-S/ AZD1222	Janssen (Johnson & Johnson) Ad26COVS1
Type of vaccine 	mRNA in lipid nanoparticles 	mRNA in lipid nanoparticles 	Non-replicating adenovirus vector 	Non-replicating adenovirus vector 
Dosage	2 doses 21 days apart	2 doses 28 days apart	2 doses 28 days apart	1 dose or 2 doses 56 days apart
Antibody detection	7 days after booster	14 days after booster	14 days after booster	14 days after booster
Efficacy	95%	95%	70%	N.A.
Planned production volume	50M (2020) 1.3B (2021)	20M (2020) 0.5-1B (2021)	3B (2021)	1B (2021)
Storage requirement	-70°C±10°C	-20°C	2-8 °C	2-8 °C
Shelf life once thawed	5 days	30 days	180 days	180 days
Phase III trial enrollment	43,000 (age 16-85)	30,000 (age 18+)	11,500 (age 18+)	Single dose 60,000 Two dose 30,000 (age 18 +)
Percentage high-risk population in phase III trial	40.90%	42%	N.A.	N.A.

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