Drug Information Bulletin

Drug Information Centre (DIC)
Indian Pharmaceutical Association
Bengal Branch
Tele fax: 033 24612776, E-mail: ipabengal.dic@gmail.com
Web Site: http://www.ipabengal.org
Contact: 09830136291

&

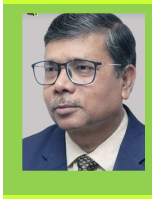
Regulatory Affairs Division (RAD), IPA

CDSCO approved Restricted Emergency use of Pegylated interferon alpha-2b (Virafin) for COVID treatment

Volume: 15 ***Number: 02*** ***24th April 2021***

Content

Editorial



Warm Greetings on the eve of World Immunization Week (24th -30th April 2021)!

Recently Govt. of India has decided that individuals above 18 will get Covid vaccines from 1st May 2021 which gave relief to the general people, but is has raised several questions as Central govt. will not provide vaccines below 45. It is learnt that vaccines for below 45 has to be provided by the State Govt. or consumers can buy it from Private health facilities against payment. The question also rose regarding price difference between Central Govt., State Govt. and private health facilities, where price is higher for State Govt. and Private facilities in comparison to the Central Govt. Already one group also raised their voice for "one nation one price" for Covid vaccines. The question is does it improve the present situation? Experts opine that unless manufacturing capacity of the manufacturers are augmented this decision may be counterproductive. The biggest manufacturer expressed that they are not able to manufacture full capacity because of non-availability of raw materials as the exporting countries imposed restrictions on export. So there is a way out of this situation is to develop technology of manufacturing of raw materials for Covid vaccines. It is learnt that the manufacturers are trying their best with the help of the Govt. and expecting that they will augment production capacity. It is expected that this joint effort will help India to come out of this critical situation. **Let we make the theme of this year's World Immunization Week- "Vaccines bring us closer" a reality!**

Dr. Subhash C. Mandal
Editor
E mail: subhash.mandaldr@gmail.com
Mob. 9830136291

New Drug: Pegylated Interferon alpha-2b (Virafin) for COVID-19 treatment above 18

Pharma company Zydus Cadila received restricted Emergency use approval from India's drug regulator for the use of Pegylated Interferon alpha-2b (Virafin) in treating moderate Covid-19 infection in adults on 23rd April 2021.

When administered early on during Covid, Virafin will help patients recover faster and avoid much of the complications, the company said in a statement. Virafin will be available on the prescription of medical specialist for use in hospitals. "A single dose subcutaneous regimen of the antiviral Virafin will make the treatment more convenient for the patients," the company said.
A multicentric trial was conducted in 20-25 centers across India, Virafin had shown lesser need for supplemental oxygen, indicating that it was able to control respiratory distress and failure which has been one of the major challenges in treating Covid-19. "The drug has also shown efficacy against other viral infections," the company further said.
Read more at:
https://economictimes.indiatimes.com/

New Drug: ChAdOx1-S vaccine for prevention of COVID-19 (Covishield in India)

Approved indication: prevention of COVID-19
COVID-19 Vaccine AstraZeneca
multidose vials containing 5 x 1011 viral particles in 5 mL

In March 2020, the World Health Organization declared that the COVID-19 outbreak was a pandemic. Since then, there have been over 114 million confirmed cases worldwide and over 2.5 million deaths resulting from SARS-CoV-2 viral infection (WHO coronavirus disease dashboard).[1] In response, many vaccines are being rapidly developed in an effort to prevent further disease.[2]
ChAdOx1-S (also known as the Oxford/AstraZeneca vaccine) is the second COVID-19 vaccine to be given provisional approval for use in Australia following the BNT162b2 Pfizer vaccine. ChAdOx1-S is a viral-vectored DNA vaccine that consists of a replication-deficient adenovirus which carries the gene encoding the SARS-CoV-2 spike protein. Following injection, the viral vector is taken up by immune cells, such as dendritic cells, and the gene is translated into the spike protein. These antigen-presenting cells show the spike protein to other immune cells, including B and T cells. This triggers the production of antibodies to the spike protein.
The provisional approval of this vaccine is based on short-term efficacy and safety data from four on going randomised controlled trials involving 23,848 people.[3] A phase I trial established early safety and immunogenicity of the vaccine (COV001 conducted in the UK)[4] and also included an efficacy cohort. Phase II and III trials (COV002 in the UK,[5] COV003 in Brazil and COV005 in South Africa) had an expanded enrolment to include a wider population that were more likely to be exposed to the SARS-CoV-2 virus (e.g. health workers).
Initial studies found that the vaccine elicited neutralising antibodies and cell-mediated responses to SARS-CoV-2.[4-6] It's efficacy is based on an interim analysis of the phase II/III studies (COV002, COV003).[3] Most of the 11,636 participants included in the interim analysis were 18–64 years old.
Although the studies excluded people with severe comorbid illness or severe immunosuppression, mild comorbidity (e.g. obesity (BMI ≥30 kg/m^2), heart disease, respiratory conditions or diabetes) was permitted and accounted for 36% of those in the efficacy analysis.
Participants were randomised to the ChAdOx1-S vaccine or a control (meningococcal group A, C, W and Y conjugate vaccine), given by intramuscular injection. Those in the COVID-19 vaccine group received either two standard doses (5 x 10^{10} viral particles/injection) or a low dose (2.2 x 10^{10} viral particles/injection) followed by a standard dose. Because of logistical problems, the interval between doses varied from 4 to 26 weeks.
The primary efficacy outcome was protection against COVID-19 disease at least two weeks after the second dose in participants who had no previous evidence of SARS-CoV-2 infection. During the surveillance period, there were 30

cases of COVID-19 among those who received the vaccine and 101 cases among those who received the control. This equated to a vaccine efficacy of 70.4%. Vaccine efficacy was 59.3% in those who received two standard doses (the licensed vaccine regimen in Australia) and 90% in those who received a lower first dose followed by a standard second dose (see Table).[3]

In a subgroup analysis of those given two standard doses, vaccine efficacy tended to be higher when the duration between doses was longer (53.3% at <6 weeks, 51.1% at 6–8 weeks, 61% at 9–11 weeks and 79% at ≥12 weeks). The vaccine appeared to reduce COVID-19 hospitalisations compared to the control vaccine (0/6307 vs 9/6297 cases), measured 22 days after receiving a standard first dose.

Having one or more mild comorbidities at baseline did not appear to affect the protective efficacy of the vaccine (73.4%). Although the vaccine was immunogenic in people aged 65 years and older, vaccine efficacy could not be established as there were not enough cases of COVID-19 in this age group.

In a safety cohort of 12,021 vaccinated people, the most common adverse events were injection-site tenderness (>60%) and injection-site pain (>50%), fatigue and headache (>50%), myalgia and malaise (>40%), fever and chills (>30%), and arthralgia and nausea (>20%). Most reactions were mild to moderate in severity and resolved within a few days. Paracetamol appeared to reduce these reactions.[4] Adverse events were milder and less commonly reported after the second dose compared to the first dose. Older participants (≥65 years) reported fewer and less severe adverse events.

There were two serious adverse events in the vaccine group – one case of multiple sclerosis and one case of transverse myelitis. Both were thought unlikely to be related to vaccination. There were also two deaths in the vaccine group and four deaths in the control group. None were thought to be related to the vaccines received in the trial.

Vaccination should be postponed in those with acute severe febrile illness. Anaphylaxis can occur with any vaccine so emergency medical treatment and supervision should be available to manage anaphylactic reactions and observation for 15 minutes after vaccination is prudent. Caution is urged in people with thrombocytopenia, a bleeding disorder, or who are receiving anticoagulation therapy.

As with the BNT162b2 Pfizer vaccine, there are limited data on the use of this vaccine during pregnancy and lactation. Given the low level of community transmission in Australia, routine use of COVID-19 vaccines during pregnancy is not currently recommended by the Royal Australian and New Zealand College of Obstetricians and Gynaecologists.[7] However, it states that vaccination may be considered in some groups with a high risk of complications from COVID-19. The guidelines also recommend that pregnant healthcare workers in an at-risk work environment should be allocated to lower risk duties, work from home or take leave of absence. If avoiding exposure is not possible, they should be offered vaccination. The Australian Department of Health has published a guide to help women making decisions about vaccination during pregnancy and breastfeeding.

The vaccine is supplied in multi dose vials that should be stored in the refrigerator (2–8°C). Each vial contains ten 0.5 mL doses. Dilution of the vial is not required before administration. A separate sterile needle and syringe should be used for each patient. Opened vials should be discarded after six hours at room temperature and after 48 hours if stored in the refrigerator.

The vaccine should be given by intramuscular injection, preferably in the deltoid muscle. Two separate 0.5 mL doses should be given 4–12 weeks apart. The patient's name and the batch number of the vaccine must be recorded in the Australian Immunisation Register. Enhanced monitoring of adverse events following immunisation is in place for the COVID-19 vaccines at national and state and territory levels.[2] Training modules for vaccination providers have been developed by the Department of Health in partnership with the Australian College of Nursing to ensure COVID-19 vaccines are handled and administered safely.

This vaccine appears to be well tolerated and is effective at preventing COVID-19. Vaccine efficacy

in older people and protection against variant SARS-CoV-2 strains is currently unclear. Follow-up data are limited so the duration of protection is also not yet known but clinical trials are on going. This vaccine is indicated for adults only.

References

1. World Health Organization. WHO coronavirus disease (COVID-19) dashboard. As of 4 March 2021. [cited 2021 Mar 4]
2. McIntyre P, Joo YJ, Chiu C, Flanagan K, Macartney K. COVID-19 vaccines – are we there yet? Aust Prescr 2021;44:19-25.
3. Voysey M, Costa Clemens SA, Madhi SA, Weckx LY, Folegatti PM, Aley PK et al. Safety and efficacy of the ChAdOx1 nCoV-19 vaccine (AZD1222) against SARS-CoV-2: an interim analysis of four randomised controlled trials in Brazil, South Africa, and the UK. Lancet 2021;397:99-111.
4. Folegatti PM, Ewer KJ, Aley PK, Angus B, Becker S, Belij-Rammerstorfer S, et al. Safety and immunogenicity of the ChAdOx1 nCoV-19 vaccine against SARS-CoV-2: a preliminary report of a phase 1/2, single-blind, randomised controlled trial. Lancet 2020;396:467-78.
5. Ramasamy MN, Minassian AM, Ewer KJ, Flaxman AL, Folegatti PM, Owens DR, et al. Safety and immunogenicity of ChAdOx1 nCoV-19 vaccine administered in a prime-boost regimen in young and old adults (COV002): a single-blind, randomised, controlled, phase 2/3 trial. Lancet 2020;396:1979-93.
6. Barret JR, Belij-Rammerstorfer S, Dold C, Ewer KJ, Folegatti PM, Gilbride C, et al. Phase 1/2 trial of SARS-CoV-2 vaccine ChAdOx1 nCoV-19 with a booster dose induces multifunctional antibody responses. Nat Med 2021; 27:279-88.
7. Royal Australian and New Zealand College of Obstetricians and Gynaecologists. COVID-19 vaccination in pregnant and breastfeeding women. Updated 22 February 2021. [cited 2021 Mar 4]

Table - Efficacy of the ChAdOx1-S vaccine against COVID-19 disease[3]

COVID-19 vaccine dosing regimen*	Cases of COVID-19		Vaccine efficacy†
	ChAdOx1-S vaccine	Meningococcal vaccine	
Low dose followed by a standard dose, or two standard doses	30/5807	101/5829	70.4% (CI 54.8–80.6)
Low dose followed by a standard dose	3/1367	30/1374	90% (CI 67–97)
Two standard doses	14/1879	35/1922	59.3% (CI 25.1–77.9)

CI confidence interval

* Low doses contained 2.2 x 10^{10} viral particles/injection and high doses contained 5 x 10^{10} viral particles/injection. Doses were given 4–26 weeks apart.

† Defined as protection against COVID-19 disease at least two weeks after the second dose in participants who had no previous evidence of SARS-CoV-2 infection

Source: Aust Prescr 2021; 44:59-61

Indian status:

This vaccine (Covishield) got Emergency approval from Central Drugs Control Organization (CDSCO) and being manufactured by Serum Institute of India (SII). This is being used for vaccination since 16th January 2021 in India for people above 45 years of age. Till date it is available free of cost in Government Institutions and INR 250 is being charged at Private health care set up. In a recent communication Govt. of India said it will be available to all having age of 18 and onwards from 1st May 2021 with varied conditions.

Over 21K tested positive for Covid after taking first dose of either Covishield or Covaxin : Govt.

More than 21,000 people tested positive for Covid-19 after taking the first dose of either Covishield or Covaxin, while over 5,500 contracted the infection after taking the second dose, the Centre said on Wednesday. Addressing a press conference, ICMR Director General Balram Bhargava said 0.04 per cent of 17,37,178 individuals, who received the second dose of Covaxin, were positive for Covid-19, while 0.03 per cent of 1,57,32,754 people, who took the second dose of Covishield, contracted the infection.

Bhargava who presented the data said vaccines reduce the risk of infection and prevent death and severe infection. "After vaccination if one gets infection then it is known as breakthrough infection," he said.

So far, 1.1 crore doses of Covaxin have been administered. Out of which 93 lakh received the first dose and out of that 4,208 (0.04 per cent) people got the infection which is four per 10,000 individuals. About 17,37,178 people received the second dose of which only 695 (0.04 per cent) tested positive for Covid-19, Bhargava said.

Of Covishield, 11.6 crore doses have been given. Ten crore received the first dose and 17,145 i.e. 2 per 10,000 people contracted the infection. About 1,57,32,754 individuals took the second dose of Covishield and of that 5,014 (0.03 per cent) got infected. Two to four per 10,000 breakthrough infections have occurred, a very small number. This was mainly healthcare workers prone to more occupational hazards, he said.

According to the data, 5,709 people contracted the infection after the second dose of either of the two vaccines. "This is a very small number and not at all worrisome. Secondly, the highly transmissible second wave also contributed (in) miniscule (way) to the percentage so this could have been even zero per cent," he said.

Responding to a question that there have been cases of people with no other exposure testing positive two weeks after vaccination, and if there is any link between vaccine and cases among those vaccinated, Bhargava said these vaccines are given to protect from the disease.

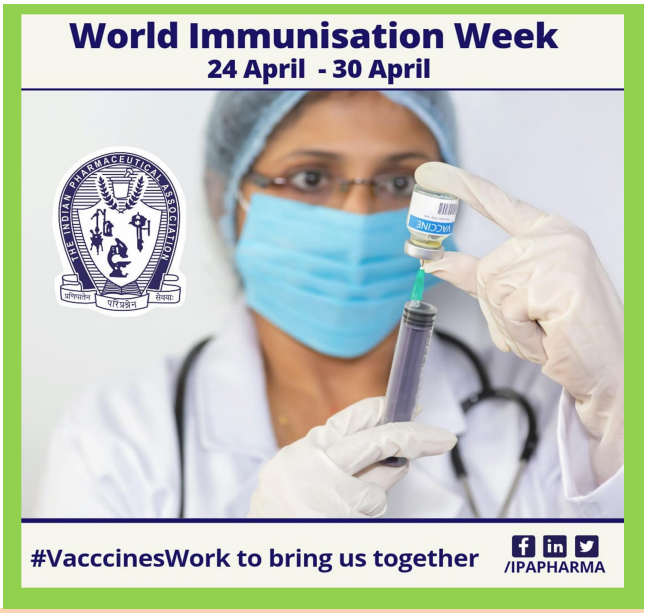
"These definitely do not cause any disease. However, the immune response takes two dose plus two weeks to fully mount. But individual variations do occur, some may get it slightly earlier some may get a delayed response," he said.

NITI Aayog Member (Health) V K Paul noted that there is a risk even after taking vaccination so "we stress people to follow Covid appropriate behaviour even after taking the vaccination".
Source: Millennium Post

Reader's Column……..

Dear Dr. Mandal,
Congratulations for entering 15 years of publication of DIB.
It is a very hard task to maintain and publish any publication on time even for the last 14 years. It is inviting efforts that attained this height. Once again I express my sincere thanks to you.
Best wishes.

Dr. R.N. Gupta
Professor, Dept. of Pharm. Sc. & Tech., B.I.T., Mesra, Ranchi



DISCLAIMER:

The Newsletter intends to provide updated and reliable information on medicines and other related issues in an attempt to equip healthcare professionals to take informed decision in recommending medicines to the patients. However, they are encouraged to validate the contents. None of the people associated with the publication of the Newsletter nor the organization shall be responsible for any liability for any damage incurred as a result of use of contents of this publication. The brand names of medicines, if mentioned, are for illustration only and the Newsletter does not endorse them.