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Effect of BCG Vaccine on Covid-19

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Why in News

Recently, Doctors and scientists in India have expressed caution on a study, which argues that countries that have deployed the BCG-tuberculosis vaccine in their immunisation programmes have seen fewer deaths from **COVID-19**.

BCG, or bacille Calmette-Guerin, is a vaccine for **tuberculosis (TB) disease**.

Key Points Related to Study

- **BCG Vaccine Policy and COVID-19 Deaths**
 - **The middle and high-income countries**
 - Countries that have universal BCG policy had 0.78 deaths per million people.
 - The countries that **never had a universal BCG policy** had a larger mortality rate, with 16.39 deaths per million people, a significant variation.
 - **Low and middle-income countries**, even if they had universal immunisation policies, were **excluded** from the analysis because they were also likely to have low testing rates for COVID-19 infection and therefore fewer reported deaths.
 - **India having a universal BCG policy in place** and relatively fewer deaths as a proportion of confirmed coronavirus infections, **wasn't included** in the analysis.
- **BCG Vaccine confers a strong immune response**
 - The BCG vaccine is known to confer a strong immune response and a significant degree of protection against **leprosy and non-invasive bladder cancers**.
 - Those countries where the elderly were likely to have had a BCG shot in their childhood were likely to be better protected against coronavirus because COVID-19 was **particularly lethal to the elderly**.

- **Cases of Different Countries**

- **Japan** (which has a BCG policy since 1947) had one of the early cases of COVID-19 but it has maintained a low mortality rate despite not implementing the most strict forms of social isolation.

Japan had 1,655 cases and 65 deaths as of March 29.

- **Iran**, which has seen at least 3,000 deaths, began implementing its BCG vaccination policy only in 1984 and therefore anyone over 36 was vulnerable.

- **Spain, France, the United States, Italy and the Netherlands:**

- These countries don't have universal BCG policies and have seen many deaths from COVID-19.
- Many of these countries don't have a universal programme because BCG has been shown to **not be always protective against tuberculosis in adults** as well as an **increased risk of mycobacterium (bacteria) species**.
- **Italy**, where the COVID-19 mortality is very high, never implemented universal BCG vaccination.

- **Views of Indian Scientists and Doctors**

- it is premature for India, that has had a **consistent TB vaccination policy since 1968**, to take comfort from the study.
- Australia, the Netherlands, the United States are going to vaccinate healthcare workers with BCG. This may provide some evidence.

Source: TH