

The use of cow dung and urine to cure COVID-19 in India: A public health concern

India is the second-largest country by population in the world that has more than 1.3 billion people. About 80% of the total Indian population believes in Hinduism.¹ Cows are not considered gods according to the religious books of Hindus. But the cow was associated with Aditi, the mother of all gods described in the most ancient Hindu scripture.² The holiness of the cow is deeply rooted in their emotions, feelings, and dreams, making them believe that protecting and caring for cows is their religious obligation. In Hinduism, the idea of killing and eating the flesh of cows is a sin.³ The Hindu religious system places great value on the products of cows. They believe that the byproducts of cows such as dung, ghee, milk, curd, and urine are purifying agents.³ In Hinduism, the cow dung is used to clean homes and for prayer rituals.⁴ They believe that it has therapeutic and antiseptic properties. The orthodox Hindu wing considers the products of the cow as the panacea to everything. For instance, an Indian minister claimed that drinking the urine of the cow can cure cancer.⁵ Another politician claimed that indigenous Indian cow milk is yellow because it contains gold.⁶ Even the government body has claimed that diseases like psoriasis, skin disorders, eczema, arthritis, inflammation, leprosy, etc., can be treated by milk, dung, and urine of cow.⁷ The running government would like to initiate a project where scientists attempt to produce toothpaste, shampoos, and mosquito repellents from the byproducts of indigenous cows.

The Hindu-majority people use cow dung and urine for their wellness and cure of illness since ancient times. Also, people use cow urine as medicine in India, Nepal, Myanmar, and Nigeria.⁸ But this behavior has tremendously increased in India after the entrance of the COVID-19 pandemic. Many people are consuming cow dung and urine under branded "cow dung therapy" for COVID cure.^{7,9} In last year, dozens of Hindu activists hosted a cow urine-drinking party in India. Some members of the Hindu nationalist party demanded that cow urine and dung can prevent and cure COVID-19. Therefore, the Indian superstitious, fanatic politicians and some other leaders disseminating the propagation that cow dung can cure COVID-19 among the general religious population.⁹ Superstitions about the byproducts of cow have got even worse in the COVID-19 pandemic situation. Many believers in India are convinced to rub their whole body with cow dung and urine, and the packs are washed off with cow milk or buttermilk when it is dried to protect them from COVID-19. They go to cow shelters once a week for this ritual with the hope that it will boost their energy levels and immunity against COVID-19. They also drink the urine of cows to boost up their immunity to fight COVID-19. Even some healthcare professionals in India participated in rituals of using cow dung and urine to ward off the COVID-19.⁹ There is no concrete scientific background behind the use of cow dung or urine to boost immunity against COVID-19. But significant health risks are associated with smearing or consuming these products. Other diseases can spread from the animal to humans through this process.¹⁰ The human body can get ringworm, Q-fever, chlamydiosis, leptospirosis, campylobacteriosis, salmonellosis, listeriosis, yersiniosis, cryptosporidiosis, and some other infectious diseases from cattle. Also, the byproducts of the cow may contain pathogenic strains of *E. coli* and *Mycobacterium paratuberculosis*.¹¹ Moreover, America's top health body Centres for Disease Control (CDC) and Prevention mentioned that mucormycetes are present in animal dung.¹² Therefore, the experts suspect a relationship between the surge in mucormycosis (black fungal disease) and the use of cow dung during the ongoing second wave of the pandemic in India.¹³ So the use of cow dung and urine might accelerate the transmission of coronavirus along with other diseases. However, cow dung and urine were the fastest-growing alternative medicine business in India. Many religious and political leaders, healthcare

professionals, other key opinion leaders, and government authorities of India promoted these byproducts of the cow for several therapeutic purposes. In fact, along with the other part of the world, Indian doctors and scientists paid little attention to these malpractices before the deadly COVID-19 pandemic.⁴⁻⁷ Now experts have picked this issue as a public health concern based on its extent and gravity during the ongoing pandemic.¹⁰

On the flip, the country is currently struggling to tackle the worst-ever hit of COVID-19 second wave. COVID-19 patients are waiting in a long line to get admitted to hospitals, and many patients are dying without getting treatment or lack of oxygen supply.⁴ Last year, a ruling party legislator claimed that the smoke from burning cow dung prevents viral infection. This year, a ruling party member of the Legislative Assembly recommended consuming diluted cow urine to defeat COVID-19. The present government authority emphasized more research on the medicinal properties of cow dung and urine. However, many Indian scientists criticized this decision. Moreover, the ministry of Ayush approved an herbal product named Coronil that claimed 100% recovery from COVID-19.¹⁴ However, it is a matter of hope that the top medical association of India has understood the gravity of the issue and warned about the use of cow dung and urine for COVID-19.¹⁰ Also, doctors and scientists all across the world have warned about any alternative treatments for COVID-19. Because the alternative therapy for the COVID-19 might create a wrong belief of security that will further help to deteriorate the pandemic crisis. The people who use cow dung and urine to boost immunity have a false sense of security. This group generally does not follow the health safety guidelines. Also, they can influence others towards their idea. Therefore, we recommend immediate initiatives against this practice. However, we are wondering about the activities of responsible authorities.

At first, the authorities should acknowledge the seriousness and consequence of this issue on public health. Then the public health authorities should create mass awareness to deal with this culture during these public health emergencies. They should inform the people that there is no scientific basis for smearing cow dung and urine to fight COVID-19. The authority should also let the people know that cow dung and urine are a metabolic waste of cows, and there are no ingredients to boost the human immune system. The authority can involve scientists, political figures, healthcare professionals, media persons, and other famous people to educate the general population about the health safety issues regarding the use of cow dung and urine for the COVID-19 cure. The government must ban any gathering for smearing cow dung and urine and positively encourage them to follow health safety rules. The public health authorities may develop programs that may educate religious believers about the associated health risks of using cow dung and urine to cure diseases. Also, the government bodies can connect religious leaders and faith communities in these initiatives to speak out against cow dung and urine for wellness.

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COVID cure, COVID-19 pandemic, cow dung, cow urine, public health

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Sohel Daria devised the study and wrote the first draft. Md. Rabiul Islam edited and revised the manuscript. Both the authors reviewed and approved the final submission.

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