

The Public Health Significance of Foot-and-Mouth Disease

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ABSTRACT

Foot and mouth Disease (FMD) is a highly contagious viral disease that affects cloven-hoofed animals such as cattle, pigs, sheep, and goats. FMD has significant public health significance as it can affect animal and human health, cause economic losses, and affect food security. Firstly, FMD can have a significant impact on animal health and productivity. Infected animals often experience fever, blisters like sores on the mouth and feet, and lameness, resulting in reduced milk production, weight loss, and decrease meat quality. FMD can also lead to high mortality rates in young animals, particularly those that are unvaccinated. Secondly, FMD can have a significant economic impact on the livestock industry. Infected animals cannot be sold or moved, leading to trade restrictions, decreased market access, and low sale prices.

Keywords: Foot and Mouth Disease, Contagious, Public Health, Viral, FMDV, FMD.

1. Introduction:

FMD is caused by an Aphthovirus of the family Picornavirus. Seven strains of FMD (A, O, C, SAT1, SAT2, SAT3, and Asia1) have been identified and they are endemic in different countries worldwide.[1] It is a transboundary animal disease (TAD) that penetrates the production of livestock and disrupts regional and international trade in animals.[2] FMDV poses a significant threat to the livestock industry worldwide. Outbreaks of FMD can result in severe economic losses due to the reduction of animals' productivity, trade, restrictions, and the cost of disease control measures. Additionally, FMD has the potential to affect human health, although direct transmission to humans is rare.

2. Impact OF FMD On Human Health: (mention any case of human associated disease)

FMD primarily affects cloven-footed (hoofed) animals, it can have an indirect impact on human health.[3] The most significant impact is the socio-economic consequences resulting from FMD outbreaks, including the loss of livelihoods, for farmers and workers in the livestock sector.[4] The disruption of food supplies and potential for increased food prices can also affect vulnerable populations, leading to malnutrition and insecurity.

3. FMD Transmission to Humans:

Humans can get FMD through contact FMD, it is extremely rare and usually occurs through direct contact with infected animals or contaminated zones and biosecurity and contaminated materials. Human infection is typically mild and self-limiting, characterized by flu-like symptoms such as fever, sore throat, vesicular lesions on the hands, feeds, mouth.[5] The primary concern is that the potential for FMDV to mutate and acquire the ability to spread efficiently between humans, which could have resulted in a widespread human epidemic.

4. Prevention/Control measure of FMD:

Minimizing the FMD outbreaks is crucial for livestock health. Vaccination of susceptible animals is a major control measure, along with strict biosecurity measure, including Quarantines, surveillance, and disinfectant procedures. Rapid detection, surveillance, and early response system are essential for effective outbreaks management. International cooperation is also critical to prevent the spread of FMD across borders.[6][7]

The control and eradication of FMD requires significant resources, leading to additional economic losses. Finally, FMD has potential implications for human health, particularly in countries where the disease is endemic. Although FMD is not directly transmitted from animals to humans, infected animals can serve as a reservoir for other infectious diseases that cannot be transmitted to humans, such as Salmonella and E. coli.

In conclusion, FMD is a significant public health issue, with implications for animal health, economic stability, and human health. Affective control and prevention measure, including vaccination and animal movement controls, are essential to prevent the spread of FMD and mitigate its impact on public health and economy.

5. Future Direction For FMDV:

FMDV risk factors associated with transmission of FMD to humans and potential for viral mutation. Develop advance diagnostic tools and vaccines should be enhance surveillance and control efforts, public campaign and awareness and education about FMD and their contraindications and can help to minimize the risks of transmission and improve early detection and well-known reporting.

6. Conclusions/Recommendation:

FMD Primarily affects animals, it's public health significance cannot be overlooked. The socio-economic impact of FMD and FMDV outbreaks and the potential for human highlight the needs for control measures, and international cooperation by the way implementing effective surveillance, prevention, and control strategies, the public health impact of FMD can be minimize ensuring the safety of dual animals and humans' population.

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