

A case of FMD in a *Bos taurus* (Jersey Cow) dealt with Homoeopathy, Antipyretics & Supplements

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Abstract: Any layman knows about ('Muh Paka Khur Paka'), the Hindi language version of the Foot & Mouth Disease (FMD) but they do not realize its contagiousness & fatal nature among live-stocks especially among milch cows. There is prevention of FMD through a vaccine but there is no treatment in veterinary science. The current case is a case of FMD in a Jersey cow or *Bos Taurus* as they are scientifically called aged 4 years with a 4 months-old calf weighing about 120 kilograms. FMD has been managed traditionally by use of natural soda ash solution for washing the lesions while some communities have applied honey & finger millet flour to the lesions (Gakuya, D. W. *et al* 2011). These traditional medicines were also reported earlier (Molan, P.C. 1992; Molan, P.C. 2001; & Hegde, P. S). In India, farmers usually make soft fodder & astringents for the suffering animal as a cure. The case describes the effectiveness of Homoeopathic medicines against the FMD virus thereby depicting that Homoeopathy is not only effective for humans but also in veterinary sciences. The article describes the case as it evolved while detailing out the treatment or care given to the cattle during a fortnight period. The article is an effort to disseminate the message among the veterinary professionals & care taker of the Cattles so that all the cases follow a pluralistic approach where the preventive & supportive methods of veterinary science is complemented with the curative methods of Homoeopathy.

Keywords: FMD, Sero-types, Homoeopathic Materia Medica, Generalities, Live-Stock Census.

About the cattle breed (www.bbc.com)

The case deals with a Jersey cow & the scientific name is '*Bos Taurus*'. The cow is from Jharsuguda, Odisha & other related information on the cow is given in a section mentioned below.

The term Jersey is used for a British breed of cattle from Jersey, a place in the British channel-islands. Jersey is one of the three channel island cattle breeds, the other two being Guernsey & now extinct Alderney. Jersey breed, known for its milk production became

popular since the relaxation of Jersey laws allowing the import of bull semen & cow embryos.

About livestock census (www.dahd.nic.in)

The livestock census started in India in 1919. There have been 20 rounds of cattle census in the country till 2020. Since the current article deals with a cow, it focuses on the cow population in India. The following table shows the cow population as per the last three livestock censuses. The livestock census is done by the Ministry of Fisheries, Animal Husbandry, Dairying of the Government of India.

Table 1

Year of the livestock census	Population of cows in millions
2007	199.07
2012	190.90
2019	192.49

About FMD (Subramaniam, S. 2013; dadf.gov.in; ICAR, PDFMD report. 2017)

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The Foot & Mouth Disease (FMD) is caused by an aptho-virus. The Incubation Period (IP) is 1-8 days but often seen within 3 days. A study mentions that FMD outbreaks were more in number in 2007-08 than 2010-11 in India. Three serotypes of FMD virus are more prevalent & these are ‘O’, ‘A’ & ‘Asia 1’. The serotype ‘O’ is responsible for 80% of cases, ‘A’ is responsible 12% of cases & Asia 1 is responsible for the remaining 8% of cases. As per the Project Director report of the Directorate of FMD of Indian Council of Agricultural Research (PDFMD-ICAR) in 2015-16, out of the total 252 cases, 244 were because of the ‘O’ serotype. Similarly, all the 150 cases were of ‘O’ type in 16-17 & 146 cases out of 149 were of ‘O’ type in 17-18. The said cow in the case is from the eastern region of India & among all the four geographical regions of India, the eastern region accounts for 43% of all the FMD cases in India. Epidemiologically, the seasonal trend of the disease indicates that the highest number of outbreaks are recorded in the month of September &

lowest in June. This means the said cow suffered in the period when there are few cases.

To deal with the cases of FMD, the National FMD control program was launched in 2003 in the country & currently a pan India FMD control program is operational in the country since September 2019 which the Prime Minister launched the program in Mathura city of Uttar Pradesh. The program offers an annual vaccine free of cost for live stocks above 3 weeks of age & a Booster dose after 3 months of the primary vaccine. The current vaccine is a new strain prepared in 2009. Unrestricted animal movements play a major role in the spread of FMD.

Signs & Symptoms of FGDs (www.thecattlesite.com; & www.slideshare.net)

The FMD is a highly communicable contagious viral disease & its primary signs & symptoms are given separately in the boxes given below.

Box 1- Signs of FGD

Vesicles or Blisters in the mouth & on feet, Erosions in the mouth or on the feet, Excessive salivation, Lameness, Drop in milk production, Weight loss, Quivering lips & frothing of the mouth

Box 2- Symptoms of FGD

High fever, Loss of appetite, Loose motion

Very often, blisters are may not be observed because the blisters easily rupture leading to erosions.

Details of the case (www.sueyounghistories.com; & Sapre ,VA. 2017)

The said Milching Jersey cow aged 4 years with a 4-month-old calf, weighing about 120 Kilograms went through the painful phase of FMD from 8.5.20 19.5.20. The details of the signs, symptoms, care, treatment, prevention & supportive therapies provided are given date wise in the table mentioned below. It is important to note that the cow was not vaccinated for FGD.

Table 2

Date	Signs & Symptoms	Homoeopathic treatment	Supportive therapy, prevention & Care
8.5.20	Watery nose, profuse salivation, refused to eat & drink	Nil, as my younger brother who followed up the case at Odisha was not informed by the owner of the cow	Folk remedies, Rice water & plain water given & the cow drank very little. The calf was fed with such drinks.
9.5.20	Along with the above symptoms, lethargy	Nil, as my brother was not informed	Folk & Home remedies
10.5.20	Along with the above symptoms, the cow could not stand for most of the day	Nil, as my brother was not informed	Folk & Home remedies
11.5.20	High fever, debilitated, lied down, profuse salivation, profuse watery discharge from nose, No food, No drink, erosions in mouth, loose stools.	My brother was informed. Using thirst as a generality, Belladonna & Gelsemium in 1000CH potency was prescribed as the cow was not thirsty. One dram of each of the	Nil, as the owner did not go to the veterinary centre at the district head quarter level.

12.5.20	All the above symptoms with more loose stools	<p>medicine was given in globules number 40 size. One dose of 20 globules from each dram was given every hour through a liquid dough of wheat flour. Along with this, 10 tablets of Ferrum Phos-6X was also given every hour.</p> <p>Same treatment continued</p>	<p>The veterinary pharmacist attended the case as a private visit & prescribed 2 tablets of Paracetamol in the morning & another 2 tablets in the evening. The tablets were fed to the cow through the liquid dough of wheat flour.</p>
13.5.20	All the above symptoms with fever at 104° F temperature	<p>Based upon the generality thirst & calmness, mouth erosion as a particular symptom, Antim Crude-200, Borax-200, Pulsatilla-200 were prescribed. One dram of each of the medicine was given in globules number 40 size. One dose consisted of 20 globules given every hour. Medicines were fed through a liquid dough of wheat flour. Ferrum Phos-6X was continued in the same manner.</p>	<p>2 injections of Paracetamol & a Dextrose Normal Saline drip were given to the cow. The cow was also vaccinated for FMD.</p>
14.5.20	No fever, No loose stool but all other symptoms present	<p>The same medicines were continued but this time given with Jaggery water as the cow had started to drink a little. Using Phatak's repertory, combining the rubrics thirst-less-ness & salivation, Stramonium & Pulastilla in 200th potency along with Ferrum Phos 6X were prescribed in the same amount & dosage as mentioned above.</p>	<p>One injection of Vitamin B 12.</p>
15.5.20	Slightly active, No fever, No loose stools, could stand for some time	<p>Using the Generality of thirst, offensive stool & mouth erosions as particulars, Merc Cor, Acid Sulph & Borax were prescribed in 200th</p>	<p>One more drip of Dextrose Normal Saline & a Calcium injection was given to the cow.</p>
16.5.20	All other symptoms subsided except the erosions in the mouth. The salivation had decreased & the cow started to eat & drink.	<p>Using the Generality of thirst, offensive stool & mouth erosions as particulars, Merc Cor, Acid Sulph & Borax were prescribed in 200th</p>	<p>No medicine</p>

	The stools were slightly offensive in smell.	potency along with Ferrum Phos 6X. the quantity, dose & frequency remained same as above.	
17.5.20	Slight salivation & slow eating & drinking were the only symptoms	Same treatment	One more drip of Dextrose Normal Saline & a Calcium injection. One more Calcium Injection, one powdered medicine for liver & another powder medicine as an energy booster.
18.5.20	Slight loss of appetite was the only symptom	Same treatment	Both powders given in jaggery water twice a day
19.5.20	No symptom except a little lethargy	Same treatment	
20.5.20	No symptom was observed & the cow ate & drank normally	Same treatment	Same treatment
21.5.20	Salivation & desire to eat indigestible things like soil	Merc Sol-30 & Cicuta Virosa-30 in one dram in globules number 40 for each of the medicine & the dosage was 10 globules per dose. Three doses of the former only during day & two doses of the latter with a dose each in the evening & night.	Same treatment
22.5.20	Same symptom	Same treatment	Same treatment
23.5.20	Same symptom	Same treatment	Same treatment
24.5.20	Less salivation & Less desire to eat indigestible things	Cina- 1000 CH given in two doses one each in evening & the other in night Only Ferrum Phos 6X continued in the same dosage till 25.5.20. As a Bio-Chemic medicine, it removes lethargy through regulation of Iron & Phosphate salts of the body. Iron positively impacts the blood cells & Phosphates positively impacts the nerve cells.	Same treatment
25.5.20	Normal Cow & Calf		Both the powders given twice a day with rice water till 25.5.20.

It is significant to notice here that the veterinary medicine has only prevention method for FMD with out a curative medicine. All the veterinary medicines given by the pharmacist were symptomatic & supportive in nature. The curative approach in the case was addressed through Homoeopathic treatment.

CONCLUSIONS

The current article again reinforces the fact that Homoeopathy is effective against viral diseases & the promotion of Arsenic Album 30CH as a preventive by the AYUSH ministry against the current COVID 19

crisis is a testimony to the effectivity against viruses (Press Information Bureau, 2020). It will be ensured that the current case is reported as a FMD by the district veterinary authority as underreporting is a big issue for ICAR. The article is only an endeavour to generate awareness among the Homoeopathic & Veterinary fraternity so that at all levels the treatment approach is an integrated approach. The integrated approach will help to minimise the socio- economic losses that occurs in families or communities whose occupation revolves around on milch cattles.

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Declaration

The author declares that the contents of the article are only suggestive in nature.

Conflict of interest

Nil

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Information on the personnel related to the article

The owner of the cow is Ms. Bui Rana, who resides in Sarbahal, Jharsuguda, Odisha, PIN- 768201. The name of the employee of the veterinary centre of Jharsuguda who treated the cow is Mr. Nayak, a Stockman in the district veterinary hospital. The local person who oversaw the condition of the cow & gave Homoeopathic medicines is Mr. Sovesh Chandra Tripathy. The lead author guided him on the lines of the treatment.

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