

ROLE OF ULTRA-DILUTED HOMOEOPATHIC MEDICINES IN THE MANAGEMENT OF NIPAH VIRUS INFECTION

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ABSTRACT

Nipah virus is an emerging bat-borne deadly zoonotic disease which is known to cause severe neurological and respiratory problems. In modern medicine there are antiviral therapies of questionable efficacy and till date no specific therapies or vaccines have been approved to treat the Nipah virus.

Homoeopathy based on the principle of 'like cures like' is an alternative system of medicine which can stimulate the healing responses of an individual to disease and hence homoeopathy can definitely make a notice in such cases. In this article, the role of ultra-diluted homoeopathic medicines in the management of NIPAH virus will be discussed.

Introduction:

NIPAH virus is an RNA virus which belongs to paramyxoviridae family, genus Henipavirus and pteropus bats are the natural reservoirs⁽¹⁾⁽²⁾. This virus is classified as Biological Safety Level 4 (BSL -4) pathogen⁽¹⁾. The incubation period of this highly fatal virus varies from 4 to 21 days followed by prodromal signs and symptoms like fever, severe headache and myalgia⁽¹⁾⁽³⁾. Primarily it causes encephalitis and respiratory troubles, especially encephalitis which develops within 7 days with most common presenting symptoms being altered mental status, areflexia, hypotonia, segmental myoclonus, gaze palsy and limb weakness⁽⁴⁾. Patients deteriorate rapidly landing up in coma and finally death within few days⁽⁴⁾. In case of survivors, residual neurological deficit may be seen ranging from fatigue, depression and focal neurological deficit⁽⁴⁾⁽⁵⁾. Associated respiratory symptoms include cough, severe dyspnoea and atypical pneumonia⁽¹⁾⁽⁵⁾⁽⁶⁾⁽⁷⁾.

Throat swabs, urine, blood, cerebrospinal fluid are recommended for diagnosis in laboratories where BSL 4 facilities are available⁽¹⁾⁽⁶⁾. Specimens for serological testing must be collected 10-14 days after onset of infection⁽¹⁾⁽⁶⁾. The best and direct detection of the virus can be achieved by Polymerase Chain Reaction owing to its high sensitivity⁽⁷⁾. For respiratory secretions or cerebrospinal fluid real-time polymerase chain reaction can be used to identify this viral RNA⁽⁷⁾. In BSL-4 laboratories, virus can be isolated directly from respiratory, urine, cerebrospinal fluid or other tissue specimens⁽¹⁾⁽⁶⁾⁽⁷⁾. Other tests may be used to include sequencing, which is used for virus characterisation and electron microscopy⁽⁷⁾. IgM antibody in serum or cerebrospinal fluid can be used for diagnosis where as detection of IgG antibodies may be a good option for surveillance⁽⁷⁾⁽⁸⁾. ELISA (Enzyme Linked Immunosorbent Assay) is most commonly used to detect IgG and IgM⁽⁷⁾⁽⁸⁾. Prevention primarily focus on *not* consuming raw date palm sap, raw toddy, bat-bitten or half eaten fruits, avoiding exposure to pigs and bats⁽⁹⁾⁽¹⁰⁾. In order to reduce the risk of animal to human transmission, proper precautions should be taken while handling any sick animal or their tissues are in order to reduce person to person transmission, patients must be isolate, personal protective equipment must be used, good hand hygiene must be maintained⁽⁹⁾⁽¹⁰⁾⁽¹¹⁾⁽¹²⁾.

Homoeopathic medicines which may be indicated for the management of NIPAH virus infection especially when the patient presents with the symptoms of meningitis⁽¹³⁻¹⁶⁾:-

1. Belladonna :- meningitis with extreme sensitiveness to noise and light, boring with head into the pillow with red sparkling eyes, red and bloated face indicative of violent congestion with violent burning sensation inside the head. Head hot with throbbing of the carotids with violent delirium and convulsive movements of the limbs.
2. Apis Mellifica :- congestion to the head and face with fullness, burning and throbbing in brain. Loss of consciousness and delirium with shrill screams while sleeping or waking especially in children.
3. Aconite :- violent burning pains through brain, especially forehead. Fever, delirium, red and bloated face ;burning sensation as if the brain were removed by boiling water. Meningitis with exudation.
4. Gelsemium :- cerebral or meningeal inflammation with intense and overwhelming congestion if the brain in children; excruciating headache with nausea, giddiness and blindness.

5. Hydrocyanic acid :- headache with vomiting, agitation with convulsions and feeble pulse. Pupils may be contracted or dilated with dimness of sight.
6. Helleborus Niger :- meningitis when exudation has already occurred, sharp shooting pains with sensory apathy. Head hot, forehead wrinkled with automatic motion one arm and leg. Scanty or suppressed urination with relief of symptoms when urine passes more freely.
7. Hyoscyamus niger :- stupor, loss of consciousness, delirium, the patient is talking of his domestic affairs. Singing, muttering, smiling, grasping at flocks, sudden starting. Pulsating waves through the head.
8. Lachnanthes :- meningitis with circumscribed redness of cheeks and most brilliant eyes ; insomnia and restlessness from severity of headache. Sensation as if brain were enlarged.

Homoeopathic medicines which may be indicated for the management of NIPAH virus infection especially when the patient presents with respiratory troubles⁽¹³⁻¹⁶⁾:-

1. Cassia Sophera :- Difficulty in breathing must sit up, bending backward aggravates the cough. Aggravation towards the evening and after midnight.
2. Grindelia Robusta :- severe dyspnea especially when lying down. Always prefers propped up position, tough tenacious mucus ameliorated by expectoration, associated with hypotension.
3. Balsamum peruvianum :- Hectic fever with debility and night sweats. Loud rales in chest with very loose cough with copious, thick, creamy (yellowish white) purulent expectoration.
4. Lobelia inflata :- exertional dyspnea with constriction of the chest.
5. Aspidosperma:- dyspnea on exertion and moving but there is no feeling of constriction. It stimulates the respiratory centres and relieves hypoxia.
6. Senega :- white tough tenacious expectoration with soreness in the chest wall. The patient tries to bring up the phlegm but is unable to do so.

Conclusion :-

Conventional treatment which addresses only the underlying pathology in these cases is of little use and comes with numerous adverse effects. Homoeopathy treats the individual as a whole, guided by miasmatic analysis and the principles of organon of medicine. The holistic principle of homoeopathy addresses not just pathology but the psychosomatic link, the person as a whole which is essential in finding a true simillimum. It offers a safe and effective therapeutic approach. Ultimately the hope lies in a comprehensive way of treatment that honours the complexity of human life, it's biology, it's susceptibility and it's inherent potential for balance.

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