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HANTA VIRUS PULMONARY SYNDROME

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ABSTRACT

In 1993, hantavirus pulmonary syndrome (HPS) was identified in peoples staying south western united states. In 2002, they identified 318 cases of HPS in 31 states. In southwestern united state during spring of 1993, after the investigation of group of unexplained respiratory deaths showcased our ability to find new and emerging diseases. Other hantavirus joined with Sigmodontine rodents and cause HPS. Infected rodents are store virus in their saliva, urine and feaces for weeks, months or for life. The features of syndrome – acute febrile illness with cardiorespiratory compromise after direct contact or inhalation of aerosolized rodent's excreta -it has been including disease with hemorrhage, then confirmed this syndrome is a viral haemorrhagic fever. For understanding of Hantavirus Disease, they allowed specific laboratory tests.

Keywords: Hantavirus, Hantavirus pulmonary syndrome, Sin Nombre Virus.

INTRODUCTION

EPIDEMIOLOGY

Usually in rural areas Hantavirus infections are mainly associated with occupational, domestic and recreational activities that leads the humans to contact with infected rodents. Greater number of HPS cases reported in spring and summer. Some following situations are epidemiologically associated with Hantavirus infection.

Without wearing gloves handling mice

Cleaning or occupying vacant cabins that are already infested with rodents.

Disturbing rodent nest

Hand planting

Keeping wild rodents as research subject

PHYSICAL PROPERTIES OF HANTAVIRUS

Based on the environmental condition viruses can survive <1 week without sunlight, period of survival is less when sunlight exposure.

WHAT IS HANTAVIRUS

They are members of genus Hantavirus Bunyaviridae family. They have 3 RNA segments and enveloped with lipids. These viruses are mainely found in Europe, Asia and America

VIRUSES CAUSING HPS

HPS caused by Hantavirus carried by rats and mice family of Muridae and subfamily of sigmodontinae . In rural and sub urban areas some species will enter in to human habitation. Each virus has a single rodent host. In United state, primary causative agent of HPS is Sin Nombre Virus, the deer mouse is the host for SNV.

RISK FACTORS

Rodent excreta are very important for transmission. The risk factor of HPS in rural setting appears to be rodent infestation. Human occupation also had a greater risk for this disease condition. Households also have higher rodent infestation. Pets also play an important role in SNV (Sin Nombre Virus) exposure. Agricultural activities also associated such as using a hand plow and planting crops. Less common were occupational and recreational exposures.

TRANSMISSION

Human Hantavirus infections are zoonoses. Humans are never been documented the virus can transmit to each other. Conduct one study on health care workers who had exposure to Hantavirus with the help of laboratory work no one have any past or recent Hantavirus infection.

CLINICAL MANIFESTATION

Characterized by pulmonary infection, cardiac depression and some hematologic manifestations. In SNV infection, clinical manifestations are outside the thoracic cavity. Rarely renal involvement is present. Patient will often have postural hypertension, tachycardia, tachypnea

DIAGNOSIS

Wildly used test is the IgM capture ELISA. Reverse transcriptase CPR This assay helps to identifies the infective genotype.

The available approach for disease control and prevention is reducing the risk by environmental modification hygiene practice and also safe cleanup waste of rodents. Rodents control in and around the home. Reduce rodent shelter and food sources inside and outside the home. Keep pet food covered. Keep food and water covered. Use spring loaded traps in home. Educate the workers who are working in high-risk setting, about Hantavirus transmission and symptoms of infection. Employers should provide a comprehensive medical screening and surveillance programme.

CONCLUSION

The available approach for disease control and prevention is reducing the risk by environmental modification hygiene practice and also safe cleanup waste of rodents. Rodents control in and around the home. Reduce rodent shelter and food sources inside and outside the home. Keep pet food covered. Keep food and water covered. Use spring loaded traps in home. Educate the workers who are working in high-risk setting, about Hantavirus transmission and symptoms of infection. Employers should provide a comprehensive medical screening and surveillance programme.

Recommend two types of disinfectant solution to cleanup rodent materials.

1.General – purpose household disinfectant

2.Hypochlorite solution

ACKNOWLEDGEMENT

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REFERENCE

[1] Amstrong, L et al, "Hantavirus pulmonary syndrome Associated with entering or cleaning rarely used rodent infested structures", *The journal of infectious disease* **1995**, 172: 1166

[2] Butler J C and C J Peters Lessons learned from the hanta virus and other hemorrhagic fever viruses, *The American journal of the medical sciences* **1996** ,311

[3] Childs J E Ksaizek TG spiropoulou CF et al serologic and genetic identification of Peromyscus maniculatus as the primary rodent reservoir for a new hantavirus in the southwestern United states.

[4] Mills JN johnson JM. A survey of hantavirus antibody in small mammal populations in selected united states national park.