

## **Man's Most Deadly Virus**

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WHILE the world has successfully eradicated smallpox and is making headway to permanently reduce the global number of polio and measles cases to negligible levels, there is however, one infectious disease that we will never be able to beat head on: Rabies.

One might argue that the Acquired Immune Deficiency Syndrome and the future mutated form of H1N1 virus are just as frightening, but in reality, rabies is truly the heavyweight in terms of virulence and sheer nastiness.

Rabies is the most deadly virus when it comes to mortality rate, which is 100 percent.

"This is because there is no cure or effective treatment for rabies once symptoms have manifested. Death is almost certain," lamented Dr. Beatriz Quiambao, Research Institute for Tropical Medicine Clinical Research Division and Rabies Research Group head during the closing program of the 6th Asian Rabies Expert Bureau (Areb) meeting held in Makati City last week.

### **New methods**

Areb, composed of experts representing nine Asian countries, meets annually to review the most recent progress in finding new methods to reduce the number of human rabies deaths.

She added that with all the medical miracles that the world were blessed with fighting diseases and ailments, there was never a vaccine developed to “kill” the virus that causes the death of 200 to 300 Filipinos annually.

“And if there is one, it would be impossibly costly and thus, impractical to use,” admitted Dr. Thiravat Hemachudha of the World Health Organizations Collaborating Center for Research and Training on Viral Zoonosis, which is based in Thailand’s Chulalongkorn University.

Fortunately, rabies control is still possible, not by cure but by prevention, according to Dr. Raffy Deray, national program manager of Department of Health’s National Center for Disease Prevention and Control.

### **Preventing rabies**

“The most cost-effective strategy for preventing rabies in the Philippines is by eliminating rabies in dogs—where 99 percent of the cases were attributed to—through animal vaccinations,” he stressed.

However, wound cleansing and immunizations done as soon as possible after getting bitten or even scratched by a suspected animal (aside from dogs, cats also come close as one of the most common carriers) could further improve prevention.

“Many people don’t realize that next to postbite immunization, washing the wound with water and soap does a lot to prevent rabies infection. Applying garlic, vinegar and undergoing the “tandok” (a folk medicine done by placing a deer or carabao horn over the wound) is not an option as these methods will only cause more swelling, irritation and introduction of dirt into the wound,” reminded Quiambao who added that patients who did not develop rabies after tandok application may not be actually bitten by a rabid dog.

### **Replication**

Once bitten or scratched by an infected dog, the rabies virus travels to the brain (through nerves inside the brain), reproduces and then travels back through the nerves to most parts of the body.

By this time, the disease has usually damaged the brain, sometimes producing violent and strange behavior ranging from excessive flow of foam-like saliva to hydrophobia ("fear of water" due to painful spasms in the throat) despite extreme thirst and biting anyone or anything within its reach.

After these symptoms have shown, death will come within a week.

"But since the virus has to work its way to the brain, this is also the chance of victims to fight it. Aside from the immediate washing of the wound area, getting the postexposure rabies vaccine and immunoglobulin is a must and should be done as soon as possible," Quiambao suggested.

But since there were cases when the victim—most especially children—is unable or afraid to report the biting incident, the doctor said getting the preexposure rabies immunization makes sense.

"When dealing with potential rabies cases, it is always best to err on the side of caution. Pre-exposure rabies immunization simplifies management by eliminating the need for rabies immune globulin and decreasing the number of doses of rabies vaccine needed," she said.

Getting the preexposure rabies immunization is also beneficial to families or individuals who live in areas where rabies infection is high, or places that are far from any clinic or hospital or where immunizing products might not be available.

## Education

“Education is also important as what we have proven in several areas around the Philippines. By including the topic of rabies prevention in school subjects, we were able to achieve significant reduction—some even up to 50 percent—of infection cases,” Deray reported.

He added that teaching rabies prevention in school enables children to convince their parents to have their pet dogs vaccinated (that usually costs around P100) or to have the whole family vaccinated (that costs around P600 to P700 in government-run clinics and hospitals).

As an example of how effective the method is, Deray said the rabies preexposure vaccination program being implemented to schoolchildren in Cabusao, Camarines Sur has resulted in no human rabies deaths this year.

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