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## Rabies Remains a Persistent and Growing Public Health Challenge in Pakistan



Naz Fatima<sup>1</sup>

<sup>1</sup>Department of Zoology, University of Central Punjab, Lahore Pakistan  
[nazfatima.pu@gmail.com](mailto:nazfatima.pu@gmail.com)

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Rabies is one of the most neglected chronic endemic diseases and preventable infectious disorders in the Indo-Pak subcontinent. It is a viral zoonotic disease with dogs as the primary source of transmission, and is a significant problem in many developing countries. According to the World Health Organization, over 55,000 people die from rabies each year, with more than 31,000 of those deaths occurring in Asia, primarily affecting children [1]. Pakistan, ranks third in the world for rabies fatalities, with approximately 2,490 deaths annually. Rabies is primarily transmitted through dog bites. Initial symptoms include fever, pain, hallucinations, photophobia, and when virus enters brain, it damages CNS and spinal cord leading to paralysis, coma, and death. While preventive treatments such as post-exposure prophylaxis (PEP) can save lives, a lack of awareness, non-vaccinated dogs, limited access to healthcare, and poor clinical diagnosis is leading cause of morbidity and mortality, particularly in rural areas [2,3].

Previous studies in Pakistan have revealed high burden of rabies in both urban and rural populations with 19.13% rabies-related deaths. Most of these deaths were in villages. The findings also indicated a poor prophylaxis with 40% bite victims visiting hospitals, 24% seeking spiritual remedies, and 11% receiving no treatment at all. This highlights a critical gap in healthcare access with diagnosis of rabies, and the need for raising awareness about the importance of seeking medical treatment for dog bites in rural communities [4].

Another study in Pakistan pointed out that cases of dog bites particularly in Karachi are underreported with many of their victims failing to receive medical attention. Karachi was also declared as a hot spot in terms of rabies exposure, mainly because of the huge number of stray dogs listed there. This highlights the pressing need to implement specific disease-controlling interventions, including enhancing access to healthcare and awareness of the risks of rabies and the need to obtain medical treatment in a timely manner. [5].

Additionally, lack of coordinated efforts, such as mass immunization, effective dog control efforts, has worsened the spread of rabies in Pakistan. Despite the strategies that have been outlined by the World Health Organization (WHO) and other international organizations to eliminate human rabies spread by dogs by the year 2030, Pakistan is not doing much to do so. Studies show that regular and accessible rabies prophylaxis, including mass dog vaccination, substantial publicity, and the establishment of well-equipped diagnostic centers are needed to control and prevent the disease [6]. A coordinated strategy of government agencies, health organization and local communities can be an important aspect of controlling rabies to avoid future deaths. The government should focus on the human vaccination, and on controlling the dog population, including making rabies vaccines readily available and by injection in hospitals especially in rural locations, and by taking measures to control dog population.

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