

Treat, Educate, Prevent: The Medical Community's Role in Rabies Prevention

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Rabies is one of the deadliest viral diseases, with a near 100% fatality rate once clinical symptoms appear. However, it is entirely preventable with timely, adequate, and appropriate post-exposure prophylaxis (PEP). India, which reports the highest number of human rabies deaths globally, has made significant strides in raising awareness about PEP. However, incomplete adherence to the PEP regimen remains a major challenge.

To effectively prevent rabies, the medical community must go beyond treating animal bite victims. Physicians must actively ensure PEP adherence by emphasizing its life-saving importance, counseling patients, and implementing proactive measures such as follow-up reminders. Strengthening these efforts is crucial to prevent rabies deaths and move towards the global goal of dog-mediated human rabies elimination by 2030.

Changing Trends in Rabies Cases in India

In the past, most rabies cases in India occurred because bite victims never sought or complied with PEP after an animal bite. However, with growing awareness, more individuals now seek medical attention and comply with PEP following an exposure. Unfortunately, even today, many fail to complete the full PEP regimen or receive inadequate treatment due to misinformation, negligence, or logistical barriers. This failure to adhere to the complete PEP protocol continues to result in rabies cases, which is tragic given that rabies is entirely preventable with timely and appropriate intervention. Ensuring that every bite victim receives and completes the correct PEP regimen must be a top priority for healthcare providers and public health initiatives.

Ethical Responsibility

Doctors and healthcare providers play a critical role in rabies prevention and have an ethical responsibility to stay informed about the latest PEP guidelines and best practices for bite management. Despite India being a global leader in rabies vaccine production, lapses in healthcare delivery continue to result in rabies deaths that are preventable. Some common gaps in knowledge and practice include inadequate understanding of PEP protocols, including the correct site and route of vaccination, appropriate dosages, and the critical need for life-saving passive immunization with rabies immunoglobulin (RIG) or rabies monoclonal

antibodies (RMABs). Additionally, misconceptions about the risk posed by minor bites or scratches often lead to inadequate PEP administration, putting patients at risk of developing rabies. Addressing these deficiencies requires continuous medical education and mandatory sensitization programs on rabies prevention, particularly for doctors working in high-risk regions, to ensure evidence-based and standardized rabies prevention practices.

Importance of Completing PEP

PEP consists of a series of rabies vaccine doses administered over 3–4 weeks, and passive immunization where indicated. Failure to complete the regimen may result in insufficient immunity, leaving the patient vulnerable to rabies. Physicians must emphasize that rabies has no cure, and prevention through complete PEP is the only option. Incomplete PEP poses a fatal risk, making adherence to the full schedule non-negotiable. A crucial component of rabies prevention is patient counseling, as many individuals discontinue PEP due to misconceptions, fear of side effects, or financial constraints. Healthcare providers must clearly explain the necessity of completing PEP, address concerns, provide written instructions, and implement reminder systems such as SMS alerts or phone calls to ensure follow-up. Engaging family members to reinforce adherence can also improve compliance. However, systemic barriers such as vaccine inaccessibility in rural areas, financial hardships, and logistical challenges in reaching healthcare facilities often hinder PEP completion. Governments and healthcare institutions must work to ensure that vaccines are freely or affordably available at public health centers and that patients face minimal obstacles in completing their PEP regimen. Strengthening these efforts can significantly reduce rabies cases and advance the goal of a rabies-free India.

Pre-Exposure Prophylaxis: An Effective yet Underutilized Tool

While PEP is crucial for rabies prevention, pre-exposure prophylaxis (PrEP) is an underutilized yet highly effective strategy. The World Health Organization (WHO), as well as the Indian Academy of Paediatrics (IAP), recommends PrEP for high-risk groups, particularly children in rabies-endemic areas, who are more susceptible to animal bites. PrEP provides long-lasting protection and can elicit an adequate immunological response even with a single booster dose years after the initial vaccination. In the event of potential exposure to rabies, individuals who have received PrEP do not require RIG or RMABs, and the vaccination schedule can be abbreviated. Both PEP and PrEP can be made more cost-effective by promoting the utilization of the intradermal (ID) route of vaccination.

Unfortunately, this crucial information often fails to reach at-risk communities. Physicians must take a proactive role in educating these populations about the benefits of PrEP and promoting its use as an effective preventive measure against rabies.

The Way Forward

Physicians are pivotal in rabies prevention. Besides treating bite victims, they must actively educate the public, ensure proper and complete PEP administration, and advocate for PrEP in high-risk populations. World Zoonoses Day on July 6 and World Rabies Day on September 28 provide opportunities for advocacy on a large scale using print and electronic media. With the availability of effective rabies biologics, and India's advanced vaccine and RMABs production capabilities, continued rabies fatalities are appalling and unacceptable. Strengthening awareness, improving patient counseling, and implementing rigorous follow-up measures for PEP completion can drastically reduce rabies cases. By taking collective responsibility, the medical community can ensure that every animal bite victim receives, completes, and benefits from life-saving PEP, ultimately advancing towards a rabies-free India.