

A WAR OF SURVIVAL BETWEEN HUMANS AND RATS IN PESHAWAR: A DIRE NEED OF A PIED PIPER TO TACKLE THIS PUBLIC HEALTH ISSUE

Peshawar, one of the oldest cities in South Asia and provincial capital has recently become a battlefield of a war between rats and local residents. This seems to be an alarming sign for the concerned officials and government authorities because unnecessary delay can lead to serious public health catastrophic outcomes.

Rats are commonly used as pets and in different laboratory experiments especially in developed countries, therefore the cases of rat bite are also reported from different countries and are not just confined to low socio-economic countries, however the situation is not as serious as in the case of Peshawar. In United States alone, the prevalence of animal bites is less than 2 million out of which just 1% of the cases are associated with rat bites^{1,2}.

Many rats are known to be disease transporters because they have got colonies of pathogens such as *Streptobacillusmoniliformis*³ which can cause "rat bite fever" characterized by high grade fever with rigors, sore throat, nausea, vomiting, arthralgias and can lead to severe complications such as pericarditis, myocarditis, endocarditis, polyarteritisnodosa, nephritis, systemic vasculitis, amnionitis and meningitis. Rat bite can also result in another disease known as "sodoku" which is caused by *Spirillumminus* and is relatively more common in Asia⁴.

In Pakistan, the cases of rat bite are reported occasionally in different cities however rats were never thought to be a threat for local community. Although rats were sporadically found in different areas of Peshawar previously, but for the last more than 6 months the situations has gone out of control of concerned authorities resulting in drastic incidents reported frequently in different parts of Peshawar. In the first fifteen days of May, more than 350 cases of rat bites were reported in Lady Reading Hospital alone⁵, which is one of the largest tertiary care hospitals of Peshawar. Another source revealed that 426 cases of rat bite were reported in just one week in the same hospital⁶. Not only men but children and women also become the victim of rat bite incidents that are taking place in the city⁷. The incidents of rat bites also resulted in death of 8 children⁸. The cases are not confined to any particular area of city but have been reported from different regions⁶; especially the rural areas⁹. The condition has been so much severe that the presence of rats has also been found in hospitals and schools¹⁰.

Some of the local residents of the city believe that the unusual growth of rats is the result of series of floods that disturbed the ecological system¹¹. Heavy and continuous rainfall can result in drastic floods which can disturb the habitat of rodents. On one hand the floods diminish the population of rodents while on the other hand it provides an opportunity to those who survive to take refuge at homes and thus they cause harm to human¹². Others believe that the rapid progression of commercial activities on various agricultural lands and establishment of different housing schemes has resulted in depletion of amount of food for available rats and have diverted them to resident homes in search of food and shelter which has resulted in disastrous consequences⁹.

The local government has tried to control the situation by taking different initiatives such as by fixing bounty on killing of rats which was then later on renounced¹³, hiring professional rat killers and use of strong chemicals⁵, ensuring availability of anti-rabies vaccine⁶ A writ petition was also been filed in March 2016 to address this situation⁹. However, in spite of all these efforts the war for survival between rats and humans is not ready to end.

The matter of concern is that we are opting for a symptomatic treatment instead of curative treatment. The region of Peshawar was regarded as the 7th most attractive region on earth¹³ but today it is known to be the 2nd most pollutant city in the world⁵. According to an estimate, more than 900 tons of waste is produced in the city out of which nearly 700 tons is collected by the concerned government authorities, thus leaving behind 200 tons of waste on daily basis⁵. The dirty sewerage remains uncovered and is allowed to get empty into canals and streams. The heaps of garbage are found on different streets and colonies while the dairy and poultry farms are located in the center of highly populated areas¹⁰.

We need to realize that it is the garbage that is serving as a maternity ward for rats that are multiplying much faster than humans. The municipal workers are tired of killing rats but still they are unable to cope up with the pace of their birth rate. Unless and until the government does not come up with an effective policy to ensure clean environment and community does not participate whole-heartedly by cooperating with the government in elimination of garbage, there is a likelihood that the community may face undesirable circumstances and may end up with losing the war for survival. There's a dire need to "nip the evil in the bud".

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