

highest attack rates. Hepatitis E is especially severe in pregnancy. The attack rates in pregnant females have been reported from 17% to 40%. Pregnant females in the second and third trimesters exhibit a case fatality rate of 20%. Frequency of abortions, stillbirths and neonatal deaths is also increased in pregnant women with hepatitis infection. Altered immune response, hormonal changes associated with pregnancy and malnutrition have been postulated as the possible factors responsible for the increased severity of the disease during pregnancy. HEV is a RNA virus, provisionally classified in the family Caliciviridae, genus Calicivirus. They are classified in 5 genotypes: genotype-I (Asia-Africa), genotype-II (United States), genotype-III (Mexico), genotype IV (Beijing, China) and genotype V (Europe). HEV is transmitted almost exclusively by the fecal-oral route. Person to person transmission appears to be distinctly uncommon. Vertical transmission of HEV infection from mother to infant is known to occur.

Detection of HEV antibodies in the sera of pigs, sheep, cattle, rodents and a lot of other animals in endemic areas raise a possibility of zoonosis for HEV. Pigs and production from pigs – are the most important animals in this possibility. Consumption of water sources by such domestic animals could also contribute to persistence of disease in endemic areas. HEV genome can also be detected in serum or stool samples using RT-PCR, which has recently been modified to increase the sensitivity and reproducibility. The most commonly used method is the detection of HEV antigens in serum via ELISA.

Prevention of hepatitis E depends primarily on providing clean water and proper sewage disposal. Boiling water before consumption, avoiding uncooked foods and vegetables and hand washing before meals appears to be the best prophylaxis [45]. The protective role of anti HEV antibodies is not certain. The occurrence of HEV epidemics in disease endemic areas suggests that either anti HEV antibody is not fully protective or that antibody levels decline with time. Immunoglobulins have been tried but their efficacy is not clear. Experimental vaccines for HEV have been developed and their effectiveness is being investigated.

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MORTALITY PERCENTAGE OF SRI LANKAN LEOPARDS (PANTHERA PARDUS KOTIYA)

The Sri Lankan leopard (*Panthera pardus kotiya*) has been classified as endangered by the IUCN (International Union for Conservation of Nature) and is a leopard subspecies that is native to Sri Lanka. The population of leopards which is not larger than 250 animals is declining due to a number of reasons which includes poaching and also the human-leopard conflict.

The leopard is the prominent predator of Sri Lanka.

A database on leopard fatalities in Sri Lanka has been maintained during the period from 2010-2016. The data were collected from mass media broadcasts and through personal communication. Twenty five cases of fatalities were collected and the data was recorded on the sex, cause of death and the developmental stage of each leopard.

The lowest fatality percentage was recorded from the up country (12%) and the highest in the low country (56%). These records disclose that the fatalities in male (60%) is approximately double that of the females (36%). Out of the deaths, 40% had been in adult males; whereas no deaths in male cubs have been recorded. With respect to female leopards, majority belonged to the sub adult category (20%) followed by mature females (12%) and cubs (4%). The lowest percentage of deaths was recorded in the year 2010 (4%), however there was a remarkable increase in 2011 (possible reasons). Although there was a decline in 2012-2013 period, the deaths again escalated up to 24% in the year 2014. Most of these deaths had been due to human activities (56%) such as snares, accidents and gunshots,. Around 1/3 had been due to unknown causes whereas natural causes such as “inter/intra species fighting (natural fatalities)” account for 12 %. Close analysis of the deaths caused due to human activities revealed that most damage had been due to snares (50%). Gun shots are responsible for 21% of the deaths where deliberate use of explosives have caused 7% of the leopard lives. Another 14% have died due to poisoning. Deaths due to vehicle accidents had recorded especially in the low country (12%). Minimizing the human-leopard conflict is an important consideration in the present due to escalating deaths of leopards in Sri Lanka which classified as an endangered animals.

The most common causes of fatality have been due to deliberate human activities. Effective management strategies such as, putting up of sign boards, Impressing the speed limits to vehicles in areas where there are evidence of leopard movements, restriction of human activities in the native habitats of the leopards. Minimizing of poaching can be done through anti poaching techniques in the form of mobile biological sensors, GPS systems to detect leopard movements, Unmanned aerial vehicles, and central computer system.

This study showed that the main causes of leopards mortality – human activity. In sub-adults, the fatality patterns were similar in male and females causes of death varied from up, mid and low countries. In the coming years this percentages can be brought down through the understanding of habitat and the reasons for fatalities. Further to this adoption of methods to protect the habitats as well as the reduction of industrial agriculture in the areas where there are high population of leopards using of effective management techniques in the form of sign boards, restrictive speed limits would reduce fatality percentage.