

CASE REPORT (7) – REPUBLIC OF KOREA EPIDEMIOLOGICAL CHARACTERIZATION OF RABIES IN KOREA SINCE 1971

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Over the forty years from 1970 to 2010, 872 rabies cases in four different animal species were recorded in Republic of Korea. The highest annual incidence of rabies was recorded with 91 cases in 1975. At that time, the Korean government carried out rabies control programs. No case was reported for 8 years from 1985 to 1992. After a recurrence of the disease was noted in Gangwon Province in 1993, continuous rabies cases were observed during the period 1993 -2003 (331 cases). To prevent rabies occurred by wild animal, oral bait vaccine had been applied to the occurrence locations. After application of bait vaccines, the annual rabies seemed to have decreased in 2004 – 2010. Recently, all rabies cases occurred in the northern part of Republic of Korea and since 2007, rabies cases were not identified in Gyeonggi Province but continue to occur and moved eastward in Gangwon Province. The nucleoprotein (N) of many Korean rabies virus (RABV) isolates collected from animals diagnosed with rabies was subjected to molecular and phylogenetic analysis. The similarities in the nucleotide sequence of the N gene among all Korean isolates ranged from 98.1 to 99.8%. Based on the nucleotide analysis of N gene, the Korean RABV isolates were classified into four district subgroups with high similarity. Phylogenetic analysis showed that the Korea isolates were most closely related to the eastern China. The epidemiological study indicated that the Korean RABV isolates originated from rabid raccoon dogs in Northeastern Asia and appropriate preventive measures including mass vaccination, slaughter of stray dogs and distribution of bait vaccine for the control of animal rabies was helpful to a substantial decrease in numbers of rabies cases in the Republic of Korea.

