Abstract

A total of 175 human serum specimens 166 from Fisherman organization of Matsu District and 9 from patients with fever of unknown origin were collected during April to August 2002 Serum samples were tested by the Enzyme-linked immunosorbent assay (ELISA). The results showed that all serum specimens were negative to Hanta-IgM but 9 male members of Fisherman organization aged from 26 to 61 demonstrated Hanta-IgG antibody Further analysis with IFA proved that the antibodies were hantavirus Seoul type Rodents were known to be reservoir host and responsible for the transmission of hantaviruses therefore 1761 small mammals including 2 orders 2 families 4 genera and 10 species were caught from the various harbors and Kinmen Matzu islands of Taiwan for hantavirus study. The mouse sera were first screened by ELISA those Hanta-IgG positive sera were then analyzed by reverse transcriptase-polymerase chain reaction(RT-PCR) The results showed that the Hanta-IgG positive rate of Rattus norvegicus Rattus rattus Rattus losea Mus musculus Mus caroli Bandicota indica and Suncus murinus were 12.0 % \$9.6 % 、 7.9 %、 25.0 %、 10.0 %、 6.8 % and 7.6 % respectively. The over all positive rate was 9.8 % (173/1,761) which was ranked in the order of Taichung harbor (28.3 %) Padoze harbor (24.7 %) Kee-lung harbor (15.7%)Kao-hsiung harbor (15.5%)Nanliaoou harbor (14.9%)Taichung wuchi harbor (12.2 %)Tongkong harbor (10.8%) Beishiliao harbor (9.4%) Yunlinhsien-bozeliao (8.8 %) Hwalien harbor (7.9 %) walien-shiti harbor (7.7 %) Hsinta harbor (7.5%) Ilan-tashi harbor (7.5%) Nanfonao harbor (7.5%) Anping harbor (4.0%) and Taitung hsinkong harbor (1.1%) according to the area where rodents were caught In Kinmen and Matsu the seropositive positive rate of 227 and 75 rodents caught during April to August (2002) were found to be 5.28 % and 5.33% respectively

Nested RT- PCR results revealed that the virus-carrier rate of hantavirus infected rodents caught in harbor is as high as 35.4 % (28 / 79) > 27.3% (12/44) and 20.0 % (1/5) for R. norvegicus. murinus and Rattus rattus respectively The nucleotide sequences obtained from the RT-PCR and nested PCR reaction products proved that the reservoir host carried the Seoul type hantaviruses

Keywords : Hantaviruses ; reservoir host ; seropositive rate ; R T - P C R