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# FIRST ISOLATION OF EQUINE RHINOPNEUMONITIS VIRUS IN IRAN

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During studies of the presence and distribution of equine rhinopneumonitis infection among soliped animals in Iran a virus, which produced cytopathic alterations very similar to those of herpesviruses in primary cell monolayers of foetal equine kidney, was isolated from a still-born foal in extremis.

Comparative studies of the isolated virus with strain L of equine rhinopneumonitis virus, obtained from Dr. G. F. de Boer of Central Veterinary Institute, Amsterdam, as 8th passage level in bovine embryo kidney cells(1), revealed a marked similarity between the two strains. Both viruses grew readily in primary cell monolayers of horse, calf, sheep, dog, and swine kidney, and produced similar cytologic changes in infected cells.

The first noticeable changes consisting of rounding and increased refractivity of the cells appeared 36 to 48 hours following infection. The cytologic changes were first focal in character and then gradually spread throughout the whole epithelial sheets of the cells. As the number of rounded cells increased within discrete foci, the cells were aggregated and piled up like bunches of grape. Formation of some syncytia and acidophilic intranuclear inclusion bodies in infected cells were also observed.

Both virus strains were found highly sensitive to ether, chloroform, and sodium desoxycholate and were shown to be serologically identical by cross neutralization tests between the strains and their representative rabbit antisera.

Electron microscopic examination of the isolated virus, propagated in horse kidney cell cultures, revealed typical herpesvirus virions, with an average diameter of about 100 mμ, in a negatively stained preparation (Fig.1).

The isolate, however, was identified as equine rhinopneumonitis virus on the bases of its cultural properties, lability to organic solvents, morphology and its antigenic similarity to a known strain of equine rhinopneumonitis virus. A detailed account of the properties of the virus will be published shortly.

The isolation of equine rhinopneumonitis virus in Iran supports the

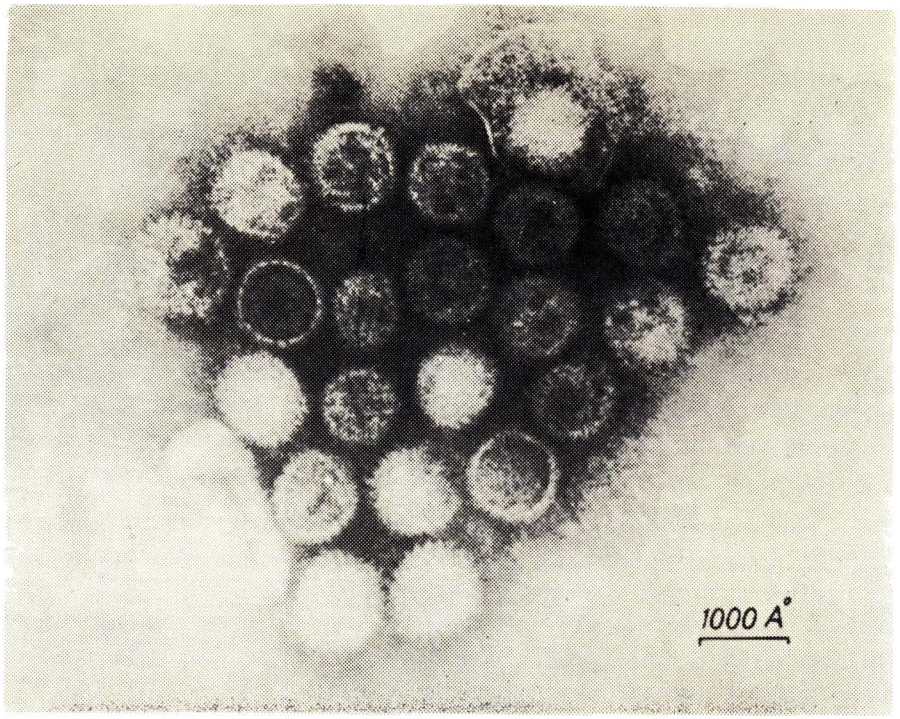


Fig. 1. - Electron micrograph of the virus stained negatively with phosphotungstic acid. "Full" particles, "empty" particles, and a "full enveloped" particle could be seen in the picture.

previous serological studies indicating an extensive dissemination of equine rhinopneumonitis virus infection among equine population throughout the country(2).

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**References**

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