DETECTION OF ANTIBODIES AGAINST PARAMYXOVIRUSES IN TORTOISES

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ABSTRACT: Reptilian paramyxoviruses (PMV) are a well-known cause of respiratory and neurologic diseases in snakes. Similar or identical viruses have also been detected in lizards. Antibodies against these squamatid paramyxoviruses have been detected in both snakes and lizards. The occurrence and relevance of paramyxoviruses in tortoises is barely investigated. A recent study has shown that tortoises can be infected with a specific paramyxovirus (tPMV) that seems to be related to but distinct from the squamatid paramyxoviruses (Marschang, et al., 2009). Yet in a separate study, several types of squamatid PMVs were also detected in a diseased tortoise (Papp et al., 2011). Pneumonia was observed in the infected tortoises in both cases as well as upper respiratory symptoms in the latter report. To learn more about the importance and prevalence of paramyxoviruses in tortoises, plasma samples from tortoises from various countries were tested for antibodies against tPMV and three squamatid paramyxovirus isolates, each belonging to a different subgroup of reptilian paramyxoviruses. The purpose of this study was to reveal not only the prevalence of the viruses in tortoises, but also to study possible cross-reactions and the antigenic relationships within the viruses. Furthermore, the surface glycoproteins (F and HN) of tPMV were sequenced to investigate taxonomic relationships between this virus and other reptilian PMV.

KEY WORDS: paramyxovirus, respiratory disease, neurologic disease

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REFERENCES

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