CONTENTS

SUMMARY

The histopathological studies had been performed at ninety baladi-breed chicks ; which could be obtained from the local commercial hatchery and maintained at the day of hatching in the temperature controlled breeders with free access to water and feed. They were divided into three groups, whereas, they were vaccinated against Marek's disease virus (MDV) vaccines with one of the following vaccines: Herpes virus of turkey (HVT), Rispens and biovalent (HVT+Rispens) vaccines. The previous vaccines were administered subcutaneously according to the instructions of manufacturers and each inoculation 1000 plague forming unit (P.F.U.). This dose was sufficient and the presence of material antibody was taken in consideration. The tissue specimens had been taken immediately after the slaughter of chicks at the age of 3,6, 9, 12, 16, 19, 21, 24,27,30 and 33 days from the cloacal bursa of Fabrici, thymus gland and spleen. The specimens were fixed, dehydrated, cleared, blocked and sectioned at 5-7 micrometers. The sections were stained by haemtotoxylin and eosin methods, then examined microscopically. The histopathological results of cloacal bursa of Fabrici, thymus gland and spleen of chicks were recorded at various ages.

The histopathological changes of the cloacal bursa of Fabrici vaccinated with Marek's vaccine (HVT) showed that the blood vessels were not affected at the early time, while from the beginning

of 9 days, the blood vessels were mildly congested. They became moderately at 19 days; while they were mildly till the end-time. The oedema was mildly along the experimental time. The hemorrhage was detected only 3 days post – inoculation. The depletion of lymphocytes was fluctuated where it was mildly at 3, 9 and 16 days. It was moderately at 6, 12, 19, 21, 30 and 33 days post-vaccination ; but it was severe at 24 and 27 days. The bursa of chicks vaccinated with Marek's vaccine (Rispen), showed that the congestion of the blood vessels was mild or absent along the experimental time. It was accompanied by a mild or a moderate oedema. The depletion of lymphocytes was mild at 6, 16, 21 and 33 days post-vaccination. The peak of depletion of lymphocytes was at 30 days. A moderate depletion of lymphocytes was observed at 12 days. There was no depletion of lymphocytes at 19 days. The bursa of chicks vaccinated with Marek's vaccine (HVT+Rispen), showed that the congestion of the blood vessels was mild at 19, 22, 24 and 33 days post-vaccination. It was moderate at 30 days. There was a mild depletion of lymphocytes at 9 and 19 days ; while it was moderate at 30 days.

The histopathological changes of the thymus gland of chicks vaccinated with Marek's vaccine (HVT) showed that at the early time, the congestion of the blood vessels was not detected till 9 days post-vaccination, while it was observed at 12 days and appeared more prominent at 24-27 days post-vaccination. Then, it began to decline. The haemorrhage was observed only at 6,9 and 12 days. The oedema was developed clearly at 24-27 days post-vaccination. A

mild depletion of thymocytes appeared at 6,9,12,24, 27, 30 and 33 days. It reached its peak or became moderately at 19 and 21 days post vaccination. The thymus of chicks vaccinated with Marek's vaccine (Rispen) showed that, the congestion of the blood vessels was mild at 12 days; then at 21,24,27, 30 and 33 days. The depletion of thymocytes was mild at 12 days, then at 27 and 30 days. Other changes were not detected. The thymus of chicks vaccinated with Marek's vaccine (HVT+ Rispen) showed that, at 6 days both the congestion and the haemorrhage revealed a moderate degree; while both the oedema and the depletion of thymocytes were in a mild degree. At the succeeding time, no changes were observed.

The histopathological changes of the spleen of chicks vaccinated with Marek's vaccine (HVT) showed that, the blood vessels were mildly congested at 9 days. Then also, along the experimental time, both the oedema and the haemorrhage were mild ; but they became moderate at 27 days. The depletion of lymphocytes affected mildly the splenic tissue at 9,12,16,19 and 21 days. The aggregation of lymphocytes was mild at 12 days ; then it was moderate at 16,19 and 21 days, but it was severe at 27 and 30 days. The spleen of chicks vaccinated with Marek's vaccine (Rispen) showed that, the blood vessels were mildly congested only at 24 and 27 days ; but the oedema was detected mildly along the experimental time. The haemorrhage was also mild along the experimental time except at 24 and 27 days became moderately. The depletion of lymphocytes was observed at 6 days ; then at 30 and 33

days with a severe degree. The aggregation of lymphocytes wa moderate and severe at 27 and 30 days, respectively. The spleen o chicks vaccinated with Marek's vaccine (HVT+ Rispen) showed tha the congestion of blood vessels was detected at 6,19,30 and 33 day with a mild degree accompanied by a mild oedema. Th haemorrhage was mildly detected at 19,21,24,30 and 33 days. A mild depletion of lymphocytes was detected at 19,21,24 and 3 days. The aggregation of lymphocytes was mildly at 24,30 and 3 days.

The results were recorded and illustrated at 9 tables and 2 coloured photomicrographs. In addition, they were discussed wit different authors.

CONCLUSION

The histological, histochemical and ultrastructural studies had been conducted on ninety normal baladi-breed chicks. The specimens could be taken immediately after the slaughter from the cloacal bursa of Fabrici, thymus gland and spleen at various age groups. The specimens were processed, sectioned, stained and examined microscopically. The histological, histochemical and ultrastructural results were recorded and discussed with different investigators. The results were provided with 54 coloured photomicrographs and 3 electron micrographs.

The histopathological studies had been performed at ninety baladi breed chicks. The chicks were inoculated against Marek's disease virus (MDV) vaccines. The specimens were taken immediately after the slaughter of chicks at different age groups from the previous lymphoid organs. The specimens were processed , sectioned, stained and examined microscopically. The results were recorded and illustrated with 9 tables and 23 coloured photomicrographs. The results were discussed with different investigators. The HVT vaccine was more suitable and preferable than Rispen and bivalent vaccines.