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**PATHO-MORPHOLOGICAL OBSERVATIONS ON MAREK'S
DISEASE IN IMMUNOSUPPRESSED CHICKENS**

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Comparative observations were histopathologically carried out on the lymphoid tissues and other organs of immunosuppressed chickens with or without MDV (JM strain) inoculation at 15 days of age.

Experimental materials were White Leghorn chickens (Line M, SPF).

A) Experiment I (49 cases of control chickens, 10~55 days old)

Bursectomy by cyclophosphamide (CY) at one day old (B·CY) consisted of 3 groups treated with 6 mg (CY₆), 9 mg (CY₉) and 12 mg (CY₁₂) of CY (3 mg/day) respectively. In the B·CY₁₂ group the bursa of Fabricius showed moderate or marked involution. The thymus showed marked involution at an early stage after treatment. The thymus-dependent areas in the spleen were undeveloped and their recovery showed a delayed tendency in chickens given high doses of CY. In thymectomy at one day old with X-ray irradiation (TH+X), the bursa of Fabricius and thymus-dependent lymphoid system showed involution and undevelopment at the early stage. There was no suppression of plasma cells. In TH+X+B·CY₁₂, the bursa of Fabricius and the bursa- and thymus-dependent lymphoid system showed the most marked involution and undevelopment in experiment I.

B) Experiment II (20 cases of MDV inoculated chickens, 17~71 days old)

IN B·CY₁₂+MDV, the bursa of Fabricius and the bursa-dependent lymphoid system showed marked or moderate involution in all cases. The thymus-dependent areas in the spleen showed undevelopment. MD T_{II}-type lesions were found in 10% of chickens examined. In TH+X+MDV, the bursa of Fabricius showed moderate or marked involution. The thymus-dependent areas showed undevelopment in almost all cases, and germinal centers and plasma cells were found in the spleen in half of the cases. MD T_{II}-type lesions were found in 67%. In TH+X+B·CY₁₂+MDV, the bursa of Fabricius, and the bursa- and thymus-dependent lymphoid system showed the most marked involution and undevelopment in all cases. MD T_{II}-type lesions were found in 25% of the cases.