優秀発表賞応募講演 | 優秀発表賞応募講演

優秀発表IV

Chairperson: Naoki Isobe, Jun-ichi Shiraishi, Shotaro Nishimura, Kazumi Kita
Tue. Sep 19, 2023 9:00 AM - 10:15 AM Venue 6 (Lecture Room 5)
VIYS-19-01～VIYS-19-03：Naoki Isobe, Jun-ichi Shiraishi
VIYS-19-04～VIYS-19-05：Shotaro Nishimura, Kazumi Kita

9:30 AM - 9:45 AM

[VIYS-19-03]Elucidation of pathological mechanism of footpad dermatitis in broilers

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To elucidate the pathogenic mechanism of FPD, we show the histological characteristics and gene expression profiles in broilers with mild to moderate FPD. 46- and 14-day-old feet were used and divided into FPD and nonFPD groups based on FPD scores. Frozen sections were prepared. After hematoxylin and eosin staining, immunohistochemical analysis was performed with antibodies epidermal keratins. In addition, expression levels of epidermal keratin genes, basement membrane genes, and cell adhesion-related genes were examined.
Thin epidermis, unclear border between each layer of epidermis and thin layer of keratin-positive cells were found as the histological characteristics of FPD. Upregulation of epidermal keratins and cell adhesion-related genes and change of the basement membrane gene were found as the molecular biochemical characteristics.
We suggest a hypothesis for the pathogenesis of FPD by compering FPD group and nonFPD group. That is, at first, the basement membrane is damaged and its genes are downregulated. Second, the entire epidermis is influenced and its tissue structure is disrupted. Then, genes in the epidermis are overexpressed to repair.