



Contribution ID: 26

Type: Oral presentation

## Black proventriculus in broiler chicks: recent Italian clinical case and laboratory findings

Thursday 11 September 2025 12:15 (15 minutes)

Avian colibacillosis refers to any localised or systemic infection caused entirely or partly by avian pathogenic *Escherichia coli* (APEC). It includes colisepticemia, air sac disease, peritonitis, salpingitis, synovitis, and, in young birds, yolk sac infection. Over the past decade, a new syndrome known as “Black proventriculus-Bp,” caused by APEC, has been recognised in two different broiler breeding farms (Wang et al., 2015; Talebi et al., 2020). In Italy in 2025, we observed eleven clinical cases of Bp in broiler chicks aged three to six days. One hundred and thirty-three chicks were necropsied and submitted for bacteriology and histological examination. Thirty per cent of chicks displayed the classical Bp lesion, while the remainder exhibited a combination of pericarditis and omphalitis/yolk sac infection. *Escherichia coli* of different serotypes (O88, O45, O15, O1) was isolated as the sole bacteria from the mucosa of the proventriculus in Bp lesions. The strains isolated were classified as weak biofilm producers. The histological investigation in one clinical case showed catarrhal erosive bacterial proventriculitis with mild ectasia of the submucosal glands, cellular necrotic cells, and bacteria in the lumen. Vascular congestion and bacteria in the lumen of the vessels, as well as fibrinous bacterial serositis with the presence of rare macrophages and heterophils. Etiopathogenetic hypotheses will be speculated and presented at the Scientific Symposium.

### Keywords

APEC (Avian Pathogenic *Escherichia coli*), Black proventriculus, chickens, Italy

### Registration ID

ECVM25-0008

### Professional Status of the submitter, who is also the speaker

Senior Scientist

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**Session Classification:** Viral Epidemiology and Case Reports

**Track Classification:** Veterinary Bacteriology, Mycology and Virology