

## Selected Abstracts From the Literature

**Successful chemical ablation of an intraorbital cyst caused by an eyelid injury and iatrogenic ankyloblepharon formation in a duck.** AePark S, Davidson H, Thompson KA, et al. *J Am Vet Med Assoc.* 2018;253:1164–1168.

Case description: A client-owned 2-year-old 1.8-kg (4-lb) male pet Rouen duck (*Anas platyrhynchos domesticus*) was evaluated because of severe swelling around the left eye following traumatic injury to the upper and lower eyelids and two associated surgeries that resulted in removal of the entire upper and lower eyelid margins.

Clinical findings: At initial evaluation, ankyloblepharon of the left eye was observed, with no upper or lower eyelid margins and a large, round, fluctuant subcutaneous mass over the left orbit. Orbital exploration and histologic examination revealed a benign cyst consisting of fibrous tissue, conjunctiva, and skeletal muscle bundles. Bacterial culture of cystic fluid yielded few *Staphylococcus delphini*.

Treatment and outcome: Excision of the cyst and evisceration of the left globe were performed, and once daily treatment with orally administered enrofloxacin suspension (12.6 mg/kg [5.7 mg/lb]) and meloxicam (1 mg/kg [0.45 mg/lb]) was initiated. Over the next 4 days, the cyst redeveloped and progressively enlarged. Accumulated fluid was aspirated from the cyst, and 20 mg gentamicin was injected intraorbitally with ultrasound guidance. Over the subsequent 27 months, no recurrence of clinical signs or adverse effects were reported by the owner.

Clinical relevance. To the authors' knowledge, this is the first report of cyst formation after adnexal injury and evisceration in birds and its successful treatment with intralesional gentamicin injection. Findings emphasized the importance of preserving lacrimal puncta during adnexal or eye removal surgeries in birds. Intralesional injection of gentamicin with the goal of destroying fluid-producing cells may be a safe and effective way to treat intraorbital cysts in birds and other species, although additional research would be required to confirm this.

**Virus-induced immunosuppression in chickens.** Gimeno IM, Schat KA. *Avian Dis.* 2018;62:272–285.

A healthy immune system is a cornerstone for poultry production. Any factor diminishing the immune responses will affect production parameters and increase cost. There are numerous factors, infectious and noninfectious, causing immunosuppression (IS) in chickens. This paper reviews the three viral diseases that most commonly induce IS or subclinical IS in chickens: Marek's disease virus (MDV), chicken infectious anemia virus (CIAV), and infectious bursal disease virus (IBDV), as well as the interactions among them. MDV-induced IS (MDV-IS) affects both humoral and cellular immune responses. It is very complex, poorly understood, and in many cases underdiagnosed. Vaccination protects against some, but not all, aspects of MDV-IS. CIAV induces apoptosis of the hemocytoblasts, resulting in anemia, hemorrhages, and increased susceptibility to bacterial infections. It also causes apoptosis of thymocytes and dividing T lymphocytes, affecting T-helper functions, which are essential for antibody production and cytotoxic T lymphocyte (CTL) functions. Control of CIAV is based on vaccination of breeders and maternal antibodies (MAbs). However, subclinical IS can occur after MAbs wane. IBDV infection affects the innate immune responses during virus replication and humoral immune responses as a consequence of the destruction of B-cell populations. Vaccines with various levels of attenuation are used to control IBDV. Interactions with MAbs and residual virulence of the vaccines need to be considered when designing vaccination plans. The interaction between IBDV, CIAV, and MDV is critical although underestimated in many cases. Proper control of IBDV is a must to have proper humoral immune responses needed to control CIAV. Equally, long-term control of MDV is not possible if chickens are coinfecting with CIAV, as CIAV jeopardizes CTL functions critical for MDV control.

**Avian filariasis in backyard chickens in Japan.** Sekiguchi M, Nonaka N, Adachi M, et al. *Avian Dis.* 2018;62:326–329.

In May 2017, a hen in a backyard chicken flock in Japan exhibited mild clinical signs, and the bird was examined for diagnosis. Unexpectedly, many