鵝出血性腎炎腸炎的診斷

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摘要

鵝出血性腎炎腸炎（HNEG）是一種發生在鵝的傳染性、急性和致死性的疾病。HNEG 通常發生在 4-10 週齡的鵝，死亡率為 4-67％，有時可高達 80％。其臨床症狀僅在死亡前幾小時出現，包括鵝獨自坐著、昏迷和死亡。剖檢發現包括皮下組織水腫、凝膠性腹水、腎臟發炎，以及較少發生的出血性腸炎。HNEG 首次於 1969 年在匈牙利被描述，後來在德國、法國和波蘭亦有報告。HNEG 的病原是鵝出血性多瘤病毒（GHPV）。鴨被認為是 GHPV 的無症狀帶原者。在中國的鴨子和臺灣的鴨子和鵝中也被偵測到 GHPV。多種方法已經被採用於檢測 GHPV，包括以腎細胞培養或鵝胚接種的病毒分離，以及各種 PCR 技術。由於在許多情況下分離 GHPV 非常困難或不可能，因此用於檢測 GHPV 核酸的 PCR 技術是更實用的診斷方法。在我們的研究中，開發了 TaqMan real-time PCR 的 GHPV 檢測方法，而 GHPV 核酸的檢測極限為 10 copies/μL。此外，我們還利用初代腎細胞培養和鵝胚胎尿囊腔和绒毛尿囊膜接種成功分離並繁殖出三株 GHPV。

Diagnosis of Hemorrhagic Nephritis and Enteritis in Geese

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Abstract

Hemorrhagic nephritis enteritis of geese (HNEG) is a contagious, acute and fatal disease occurring in geese. HNEG has been described in geese of 4-10 weeks of age with mortality rates ranging 4-67%, and sometimes up to 80%. Clinical signs present only a few hours before death and include self-isolation, coma and death. The necropsic findings include edema in subcutaneous tissues, gelatinous ascites, inflammation of the kidneys, and, less frequently, hemorrhagic enteritis. HNEG was first described in 1969 in Hungary and later was also described in Germany, France and Poland. The etiological agent of HNEG is goose hemorrhagic polyomavirus (GHPV). Ducks are considered asymptomatic carriers of GHPV. GHPV has been also detected in ducks in China, and in ducks and geese in Taiwan. Several methods for the detection of GHPV have been adapted, including virus isolation based on either kidney cell culture or goose embryo inoculation as well as various PCR techniques. Since the isolation of GHPV is very difficult, the PCR test for the detection of GHPV nucleic acids is more practical. In our study, a TaqMan-based real-time PCR for the detection of GHPV was developed and the detection limit of of GHPV nucleic acids was 10 copies/μL. In addition, we also isolated and propagated three strains of GHPV successfully, using primary kidney cell culture and goose embryo. The propagation using goose embryo could be through either allantoic cavity inoculation or chorioallantoic membrane inoculation.