

عنوان مقاله:

Application of metagenomic sequencing toward rapid and sensitive diagnosis of goose avastrovirus infection in China

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نویسندگان:

Guangwei Zhao - Department of Veterinary Medicine, College of Veterinary Medicine, Southwest University, Chongqing China

Xinzhu Deng - Department of Veterinary Medicine, College of Veterinary Medicine, Southwest University, Chongqing China

Di Wu - Department of Veterinary Medicine, College of Veterinary Medicine, Southwest University, Chongqing China

Ruibing Cao - Department of Veterinary Medicine, College of Veterinary Medicine, Nanjing Agricultural University, Nanjing, China

Aojun Shao - Chongqing Sanjiezhongxin Bioengineering Co., Ltd, Chongqing, China

Yu Zhou - Chongqing Sanjiezhongxin Bioengineering Co., Ltd, Chongqing, China

Tianqi Zhang - Chongqing Sanjiezhongxin Bioengineering Co., Ltd, Chongqing, China

Ge Li - Chongqing Sanjiezhongxin Bioengineering Co., Ltd, Chongqing, China

Hongzhang He - Chongqing Sanjiezhongxin Bioengineering Co., Ltd, Chongqing, China

Jing Lu - Department of Veterinary Medicine, College of Veterinary Medicine, Southwest University, Chongqing China

Liwu Zhang - Chongqing Sanjiezhongxin Bioengineering Co., Ltd, Chongqing, China

خلاصه مقاله:

The gosling gout, a newly emerged disease, has widely broken out in China since ۲۰۱۷. Typical signs for the disease include diarrhea, anorexia, depression, dehydration, emaciation and paralysis. At autopsy, uratoses were the main pathological change which could be found at kidney, pericardium, air sac, muscle and leg joint. In this study, gosling gout was firstly diagnosed by metagenomic analysis. Samples of kidney, Fabricius bursa, spleen and jejunum were collected and submitted to next-generation DNA sequencing. Our results demonstrated that goose avastrovirus was highly related with this disease. We confirmed the sequencing results by reverse transcription polymerase chain reaction method and artificial infection experiment and got consistent results. In summary, metagenomic sequencing method combined with traditional molecular identification was applied toward diagnosis of a novel gosling gout disease in China and revealed that goose avastrovirus was highly related with this disease. It has been proved to be a

powerful tool for rapid and sensitive diagnosis of animal diseases, especially for some exceptional pathogens. In addition, host range, variation, molecular pathogenesis and potential zoonotic infection of this novel goose astrovirus .need to be further studied

کلمات کلیدی:

China, Diagnosis, Goose avastrovirus, Gosling gout, Metagenomic analysis

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