

عنوان مقاله:

Phylogenetic grouping of Avian Pathogenic Escherichia coli (APEC) isolated from suspected broiler chickens to colibacillosis in industrial chickens farms in the Hamedan province

محل انتشار:

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خلاصه مقاله:

Introduction and Objectives: Avian colibacillosis is an acute systemic disease can cause extraintestinal infections such as aerosacculitis, polyserositis, perihepatitis, salpingitis, pericarditis, osteomyelitis and septicemia in birds. The most considered agent of avian colibacillosis is Avian-Pathogenic Escherichia coli (APEC). APEC could be responsible for economic loss in the poultry industry and also has zoonotic importance. Several methods including serotyping, pathotyping and phylootyping have been used for E.coli typing and assigning. APEC isolate can be assigned by Clermont E. coli phylo-typing method a useful and inexpensive genetic tool for bacterial typing. Based on this technique APEC strains are belong to eight phylo-groups (A, B1, B2, C, D, E, F and Escherichia clade I).The most prevalent phylogroups associated with colibacillosis are phylogroup A and D. The aim of the present study was to assignment of the phylogenetic group in an APEC isolated from suspected broiler chickens to colibacillosis. **Materials and Methods:** The present study was carried out on APEC strains (n= 100) isolated from suspected broiler chickens to colibacillosis in industrial chickens farms in the Hamedan province. The bacterial strains DNA were assigned to phylogenetic typing using the revised Clermont E. coli phylo-typing method a Quadruplex PCR based procedure. **Results:** The Clermont E. coli phylo-typing method results showed that over 81% of APEC isolates can be assigned to eight phylo-groups (A, B1, B2, C, D, E, F and Escherichia clade I) and 19% of isolates were not ascribable to any group. Out of 100 APEC strains the predominant phylogroups are phylogroup E (23 isolates) and D (20 isolates). **Conclusion:** Our finding indicates that most predominant phylogroups of APEC detected from broilers is E and D .phylogroup, however future study and application of new methods for APEC typing is necessary

کلمات کلیدی:

.Avian-Pathogenic Escherichia coli (APEC), Colibacillosis, Broiler, phylo-typing

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