Typing of Rhinoviruses Detected from Respiratory Tract Samples by Molecular Methods: A Retrospective Study

Beyza TUNER

0000-0002-6887-6725
BURSA ULUDAG UNIVERSITY
GRADUATE SCHOOL OF HEALTH SCEINCES
MEDİCAL MICROBIOLOGYDEPARTMENT
MSc PROGRAM

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SUPERVISOR

Prof. Dr. Harun AĞCA
0000-0002-2651-2034
BURSA ULUDAG UNIVERSITY
GRADUATE SCHOOL OF HEALTH SCIENCES
MEDICAL MICROBIOLOGY DEPARTMENT
BURSA – TÜRKİYE

THESIS ABSTRACT

This study aimed to make molecular subtyping of RVs detected in nasopharyngeal swab samples sent to Bursa Uludağ University Medical Microbiology Department PCR laboratory and to determine the seasonal distribution of types and their relationship with age and gender categories.

In this study, RVs were found to circulate year-round and peak in the fall. In 80 samples, RV-A, RV-B, and RV-C were found in 31 (38.75%), 8 (10%), and 33 (41.25%) samples, respectively. Three samples (3.75%) were typed as EV-D68, while five (6.25%) samples could not be typed. Thirty-one subtypes were identified 16 for RV-A, 3 for RV-B, and 12 for RV-C. While RV-A was detected in all seasons, RV-C was frequent in autumn (p<0,05), and RV-B was detected in spring and autumn. We found that RV-A infections were seen at earlier ages (p<0,05), and RV-C infections were seen at later ages (p<0,05). It was found that RV types and distribution were similar to the studies conducted in our country before the pandemic, and types were not affected by the pandemic.

APPLICATION AREAS OF THE THESIS RESULTS

It is the first study to typify Rhinovirus in our country, in the Southern Marmara Region, and during the pandemic period. Data RV molecular makes essential contributions to its epidemiology.

ACADEMIC ACTIVITIES

Tuner, B., & Agca, H. (2023, Mart). Solunum yolu örneklerinden saptanan rhinovirusların moleküler yöntemlerle tiplendirilmesi: Retrospektif bir çalışma. 23. Uluslararası Türk Klinik Mikrobiyoloji ve İnfeksiyon Hastalıkları Kongresi, Antalya.

KEY WORDS

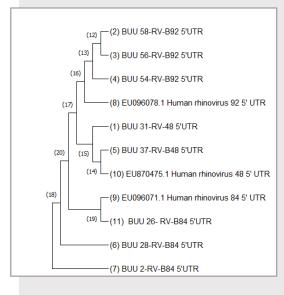- ✓ Rhinovirus
- ✓ Sequence analysis
- ✓ Molecular epidemiology

CONTACT

E-MAIL:
602059001@ogr.uludag.edu.tr

THESIS SUPERVISOR

TELEPHONE:
+90 224 295 4117

E-MAIL:
harunagca@uludag.edu.tr

Phylogenetic tree:
- (12) (2) BUU 58-RV-B92 5'UTR
- (13) (3) BUU 56-RV-B92 5'UTR
- (16) (4) BUU 54-RV-B92 5'UTR
- (17) (8) EU096078.1 Human rhinovirus 92 5' UTR
- (1) BUU 31-RV-48 5'UTR
- (20) (15) (5) BUU 37-RV-B48 5'UTR
- (14) (10) EU870475.1 Human rhinovirus 48 5' UTR
- (9) EU096071.1 Human rhinovirus 84 5' UTR
- (18) (19) (11) BUU 26- RV-B84 5'UTR
- (6) BUU 28-RV-B84 5'UTR
- (7) BUU 2-RV-B84 5'UTR