

Real world evidence data on rabies prophylaxis in Serbia

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Background: Rabies is a lethal zoonosis with worldwide distribution and is caused by Rabies virus (RABV), which affects the central nervous system of mammals and leads to signs of encephalomyelitis with almost 100% fatality rate. Annually, about 700 people in Serbia receive anti-rabies prophylaxis, from which 50% are indications of post-exposition prophylaxis (PEP). Serological assessment remains an important component in rabies prophylaxis as a tool to confirm development of adequate Rabies virus neutralizing antibody (RVNA) titer in patients or to indicate administration of a booster vaccine.

The aim of this study is to describe the serological status after PEP via reduced and complete Essen regime with Verorab® vaccine on the national level.

Materials and methods: This retrospective observational study was conducted by using information from RFFIT database, from which patient demographic data, RVNA titer, immunization scheme, vaccine lot and HRIG administration were exported for further use. We included cases where the PEP (reduced or complete Essen regime) was implemented in the period 2017-2019.

Results: We found that patients who are not successfully immunized via reduced Essen regime are significantly older than persons who are successfully immunized. Moreover, no relationship between RVNA titer and vaccine potency/lot and HRIG administration was found. Additionally, patients who did not received HRIG during PEP have significantly higher RVNA values compared to patients who received HRIG.

Conclusion: This real-world evidence data could be used for further improvement and rationalization of rabies prophylaxis in Serbia and other countries where human rabies prophylaxis is implemented.