Influenza Vaccine Uptake among Patients with Juvenile Idiopathic Arthritis: A Multi-center Cross-sectional Study

Noa Alpert MD[1], Foteini Dasoula MD[2], Amit Ziv MD[1], Barbora Balažiová MD[3], M. Yildiz MD[4], Merav Heshin Bekenstein MD[5], Nataša Toplak, MD, PhD[6], Yosef Uziel MD MSc[2], for the PRES Vaccination Working Party

[1] Pediatric Rheumatology Unit, Meir Medical Center, Kfar Saba, Sackler School of Medicine, Tel Aviv, Israel
[2]Second Department of Pediatrics, P. & A. Kyriakou Children's Hospital, National and Kapodistrian University of Athens, Greece
[3]Department of Pediatrics, Comenius University Medical School in Bratislava, National Institute of Children's Diseases, Bratislava, Slovakia
[4]Cerrahpasa Medical School, Istanbul University-Cerrahpasa, Istanbul, Turkey
[5] Pediatric Rheumatology Clinic Dana-Dwek Children's Hospital, Tel Aviv, Sackler School of Medicine, Tel Aviv, Israel
[6]Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Faculty of Medicine, University of Ljubljana, Slovenia

Background and Objectives: Although most countries provide influenza vaccines, coverage among at-risk groups like those with juvenile idiopathic arthritis (JIA) is unknown. We assessed the influenza vaccination rate among children with JIA and their caregivers' perceptions about the vaccine, and identified facilitators that could increase uptake. With the eruption of the COVID19 pandemic, we expanded our study to determine whether the pandemic affected vaccination rates a year later.

Methods: This multi-center, cross-sectional study was performed in 7 countries. Clinical and demographic data, vaccination uptake, knowledge and perceptions about influenza vaccine and the COVID-19 pandemic were collected via questionnaires. Results were analyzed using descriptive statistics.

Results: Prior to the COVID- 19 outbreak 287 JIA caregivers were surveyed. Most were employed (72%) and had tertiary-level education (50.9%). The most common diagnosis was oligoarticular JIA (28.9%). According to national vaccination schedules, 82.2% of the JIA patients were fully vaccinated. Last fall, 87 children (30.3%) were vaccinated against influenza. The second highest vaccine uptake was in Israel (1853, 34%). The major reason for non-vaccination was unawareness of the need (39.7%). 28.2% (13/ 46) parents reported that they would now let their child receive flu vaccine due to the COVID-19 pandemic, although the flu vaccination rate did not change (19/46, 41% received the flu vaccine). Among 46 caregivers in Israel, 71.7% reported concern that their child would contract COVID-19

Conclusion: Influenza vaccine uptake remains low among JIA patients. Informing families, discussing their concerns and organizing campaigns to address their fears and highlight the importance of the influenza vaccine for the JIA population may increase vaccination rates. It appears that the COVID 19 pandemic has increased the willingness for flu vaccination but did not lead to increased vaccination rates.