



Universitatea
Transilvania
din Braşov

Transilvania University of Braşov

HABILITATION THESIS

ABSTRACT

THE IMPACT OF ACUTE INFECTIONS AT PEDIATRIC POPULATION

Domain: MEDICINE

Author: FALUP-PECURARIU OANA GABRIELA

Transilvania University of Braşov

BRAŞOV, 2021

Until the present moment my whole career has been mainly focusing on children's infectious diseases and their impact on the health of pediatric population. In strict correlation with this I have been studying for several years the antibiotic resistance due to various etiological agents in my region. I started my personal scientific work with pneumococcus. The primary focus was to demonstrate the carriage of pneumococcus in pediatric disease. The main findings at that particular time were the high carriage rates along with the high resistance rate to the mostly used antibiotic. As a natural forward step was the etiology of acute otitis media at children under 5 years of age and the next published papers were directly linked towards demonstrating that the presence of pneumococcus in the nose is strictly linked to that in the lungs and the impact of vaccination on the mucosal diseases determined by *Streptococcus pneumoniae*. In parallel to being part of the European CAP-PRI group that was studying community acquired pneumonia, we have published a position paper regarding the similarities and discrepancies between different published guidelines and the European approach. Moreover, we have published papers regarding community acquired pneumonia, its radiological findings and the particularities of the European pediatric population and also the different vaccination policies among European countries. In this strict line my common work with the European centers has determined the publishing of an important paper addressing the issue of infectious due to *Staphylococcus aureus* and the presence or absence of the PVL gene. During this thesis I have approached the subject of this particular article. In the strict line of treatment and its challenges we have published a collaborative network study regarding the use of different types of medication to prevent the recurrences of upper respiratory tract infection.

There is a whole published English literature regarding the role of viruses in paving the way towards severe infection including pneumonia due to pneumococcus. We have been part of an European network at which we studied the different types of acting of healthcare workers towards vaccination against influenza. Romania is a country in which the level of knowledge and acceptance on flu vaccination is still very low compared to other countries. We have also studied the drivers to vaccination against flu. From all the published articles we have understood that in Romania, there is a great need to promote vaccination and also to educate from a very young age about the beneficial outcomes of vaccination.

In line with the need to better understand the reservoir of the bacterial agents in our region and due to the fact that Romania had in 2016 an outbreak of Hemolytic uremic syndrome cases (HUS) we published the first study regarding the presence of Shiga like

toxins in our region and the high prevalence of these agents in Brasov area. We have shown that we may presume we may have constant small outbreaks of HUS.

Working with infants and toddlers is also highlighting not only the existence of different urinary tract infections but also malformations. Moving a step further on we have shown that at a very young age the most frequently encountered bacterial agents for urinary tract infections are highly resistant to most used antibiotic regimens. Therefore we had to implement at a local level a new protocol to start treatment at this very young age.

Looking forward to a more severe pathology and also, at least for Romania, data were scarce at children, osteomyelitis and acute arthritis I was part of the first Joint ESPID guideline for the two diseases in which we have discussed different approaches in regard of clinical and therapeutic management.

The impact of antithermic prescription after immunization we have also published and article in which we have shown that there is no need to prescribe paracetamol after immunization and also that prescribing it may lower the immunological response. The study was a multicenter randomized trial and the studied groups had a very well defined randomization.

Inflammation markers and the border line between infectious and noninfectious etiology at oncological patient was also a subject of interest in direct line with all the other published papers.

My published review papers were in line with all my research activity. The presentations that I sustained all over Europe and in my own country at different Conferences and Congresses reflected my whole activity and research. In regard with my community involvement I was the President of ProImunizarea and had talks regarding the importance of correct immunization. Giving presentation at high schools in Brasov at which we presented the importance of getting immunized for a wide range of diseases like HPV, meningococcal, flu and hepatitis A was one of my teaching objectives regarding the young ones.

At the Childrens Hospital Brasov, we invited foreign professors to talk about infectious diseases and also about the importance of vaccines in the public health. For over 13 years I am the organiser of an ESPID supported teaching course that gathers the most prominent speakers on infectious diseases from the whole world and it is a well known teaching course for Romanian Pediatrician. For the last 5 years we have been organizing winter schools that is addressed mainly to the young generation of residents of various

specialities. We try to make all these meetings even in these challenging times very interesting and interactive.