Baština Akademije nauka i umjetnosti Bosne i Hercegovine

Cardiovascular diseases and oral health – the impact of pregnant women’s oral health on children’s cardiovascular health

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INTRODUCTION

The book „Cardiovascular Diseases and Oral Health" talks about the impact oral health of pregnant women has on the cardiovascular health of children. It was created as a result of years of teamwork of medical professionals on the International Project of the Committee for Cardiovascular Pathology of the Department of Medical Sciences of the Academy of Sciences and Arts of Bosnia and Herzegovina, a project which has been under implementation since 2017 in Bosnia and Herzegovina, Croatia and Germany.

The results of the first phase of the project were presented at the World Congress on Cardiology held in **Rome, in August of 2018**. Dinarević SM, Topić B, Jurišić S, Prohić S, Sporišević L, Saric S, Sarić GK, Krželj V, Jogunčić A and Ramić: **"The challenges of detecting risk factors for the development of atherosclerosis"**, Challenges in Cardiology: Cardiology Congress, August 16-18, 2018, Rome, Italy, https://cardiology. innovincconferences. com/, p: 28-30, 2018, publication: Dinarević SM, Topić B, Jurišić S, Prohić S, Sporišević L, Sarić S, Sarić GK, Krželj V, Jogunčić A and Ramić: "The challenges of detecting risk factors for the development of atherosclerosis", J Cardiovasc Dis Diagn 2018; 6: 342. doi: 10.4172 /2329-9517.1000342, ISSN: 2329-9517; p:2-9.

At the **8th Congress of Cardiologists and Angiologists of Bosnia and Herzegovina** held in September of **2018** in Sarajevo with international participation, a part of the study: **"Oral and Cardiovascular health – The Challenges of Detecting Risk Factors for the Development of Atherosclerosis"** written by the following authors: S Mesihović- Dinarević, L Sporiševic, B Topić, S Kupešić, S Sarić, GK Sarić, V Krželj, A Jogunčić, S Prohić, A Ramić was presented. The study was published in the Book of abstracts, ISSN: 9772 566 471006; vol.1; No:1, sepmt 2018; p:185-186.

The results of the second phase of the international project were presented in Split in April 2019 at the annual international 36th Seminar "Croatian Spring Pediatric School". Paper titled "**New Potential Risk Factors for Prematurity and Cardiovascular Diseases in Children"** written by Senka Mesihović-Dinarević, Lutvo Sporišević, Berislav Topić, Vjekoslav

Krželj Sanja Jurišić, Grit Kirsten-Sarić, Senad Saric Anes Jogunčić, Samir Prohić, Aida Ramić was also published, Paediatria Croatica. 2019; vol. 63 (Supl 1): 1-5, ISSN 1330-724X, UDK 616-053.2 36. Seminar Croatian Spring Pediatric School, Split, Croatia, 8-12.4.2019.

The 3rd International Conference on Women Health was held in Nice during May 30-31. The Conference gathered numerous eminent medical experts from the United States of America and Europe who presented the latest papers and research in this field. The results of the scientific research study continue to generate significant scientific interest. The study which has been conducted since 2017 as a joint effort in the countries of the region, Bosnia and Herzegovina, Croatia, and Germany, explores new potential risk factors for premature birth. Pregnancy is a condition of complex physical and physiological changes that have major effects on multiple organ systems. Some authors suggest a possible link between periodontal disease in pregnant women and the risk of premature childbirth, low birth weight and gestational age of the newborns and possible cardiovascular diseases. Good oral health is reflected on and affects general health as well as quality of life. Pregnant women with periodontitis have 2 to 7 times higher risk of premature birth. Incidence of premature births and low birth weight deliveries varies from 5% to 18% depending on the geographical area and characteristics of population. The causes of premature births are believed to be unknown in 50% of cases, and other potential causes are: socio-economic factors, acute and chronic diseases, multiple pregnancies, gynecological causes, hereditary diseases, placental and other causes. It is extremely important to identify potential risk factors related to premature birth and low birth weight deliveries because this can significantly reduce incidence, perinatal mortality, number of potential perinatal complications, financial costs of neonatal intensive care and therapy and cardiovascular repercussions on the health of the newborn. Primary prevention of atherosclerotic should start as early as possible, during pregnancy by creating healthy lifestyle. Proper nutrition in pregnancy, monitored pregnancy and regular dental care can reduce the frequency and occurrence of caries, periodontal diseases, preterm births, and cardiovascular consequences on the health of the newborn and contribute to better overall health of the society. The results of the Study constitute the health base for the Balkan region, as well as the geographical, demographic, and epidemiological source of information for detection and identification of new potential risk factors for preterm birth and the possible development of atherosclerosis. Published paper: Dinarević-Mesihović S, Lutvo Sporišević, Berislav Topić, Sanja Jurišić, Senad

Saric, Grit Kirsten-Sarić, Vjekoslav Krželj, Anes Jogunčić, Samir Prohić, Aida Ramić: **"The oral health of pregnant women as a new potential risk factor for prematurity and cardiovascular diseases in children"** 3rd International Conference on Women Health and Breast Cancer, 30-31.5.2019, Nice:141st Conference Scientific Federation; p:34-35. http://scientificfederation.com.

In December 2019, the results of the second phase of the project were presented in **Florence** and the following paper published: Senka Mesihović-Dinarević, Anes Jogunčić Grit Kristen Sarić, Liana Cambj-Sapunar, Davor Petrovic, Berislav Topić, Vjekoslav Krželj, Sanja Jurišić, Senad Sarić, Lutvo Sporišević, Samir Prohić, Aida Ramić: **"The influence of mother's nutrition and oral health on the child's blood vessel development",** December 5-6 2019, Florence, Italy 26th International Conference on Pediatric Cardiology and Congenital Heart Disease; Euro Sci Con; Archives of Medicine; ISSN 1989- 5216; DOI 10 36648 /19895261-C3-013; p:21-22.

At the **10th Europaediatrics Congress** that took place in **Zagreb, Croatia** from 7-9 October 2021, the following paper was presented: **"Child's blood vessel development in relation to mother's dietary eating habits and oral health"** written by: Senka Mesihović-Dinarević, Anes Jogunčić, Kristen Sarić, Lutvo Sporišević, Berislav Topić, Vjekoslav Krželj, Liana Cambj-Sapunar, Davor Petrović, Sanja Jurišić, Senad Sarić, Samir Prohić and has been published in Arch Dis Child 2021;106 (Suppl 2): A1–A216.
A presentation of results of the project **"A new potential risk factors for prematurity and cardiovascular diseases in children"** written by: Senka Mesihovic-Dinarevic, Anes Jogunčić Grit Kristen Sarić, Liana Cambj-Sapunar, Davor Petrovic, Berislav Topić, Vjekoslav Krželj, Sanja Jurišić, Senad Saric, Lutvo Sporišević, Samir Prohic, Aida Ramić, was planned at the **10th World Congress of Perinatal Medicine in Tuzla**, but due to the COVID-19 pandemic, it was postponed to 2022.

The result of the final phases of this project is the publication of a **book/ monograph** that is presented on the following pages and contains six chapters.

Special thank you to all team members for their hard work on this prospective research: academician Berislav Topić, PhD, Vjekoslav Krželj, PhD, Lutvo Sporišević, PhD, Samir Prohić, PhD, Aida Ramić, PhD, Senad Sarić, Prim. Dr. Grit Kristen, MD, Lian Cambj-Sapunar, MD, Davor Petrović, MD, Anes Jogunčić, MD, Sanja Jurišić, MD, PhD, Zana Boloban, MD, nurses: Enita Turajlić and Sanela Begović, as well as pregnant women who took part in the research and showed interest in contributing to science in this sufficient unexplored field.

Colleagues expressed enthusiasm for researching the new and selflessly gave their contribution. The presented results attracted the attention of the medical community, which makes us incredibly happy. I hope that these results will serve the profession and science and be the basis for future research.

Sarajevo, October 2021. Prof. Senka Mesihović-Dinarević, MD, PhD



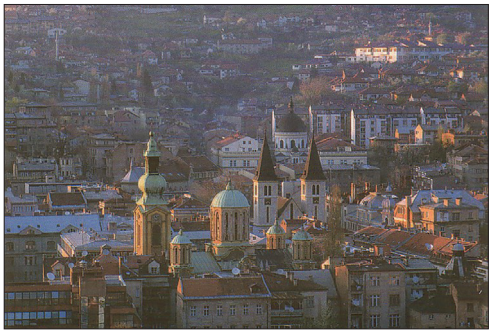
Rome



Florence



Nice



Sarajevo