**“Prematurity and cardiovascular disease-a possible new risk factors”**

Senka Mesihović-Dinarević, Anes Jogunčić Grit Kristen Sarić, Liana Cambj-Sapunar, Davor Petrovic, Berislav Topić, Vjekoslav Krželj, Sanja Jurišić, Senad Saric, Lutvo Sporišević, Samir Prohic, Aida Ramić

**Introduction and Aim**: A possible association of periodontal diseases and dietary mother’s habits on adverse pregnancy outcome such as preterm delivery and differences in blood vessel development have been recently investigated.

The aim of the study was to evaluate the relationship between the oral health of mothers, dietary habits during pregnancy with the development of the foetal vascular system, specifically coronary and carotid arteries and possible preterm delivery.

**Methods**: It was designed as a cohort study, inclu­ding 40 pregnant women selected by random selection from a total number of pregnant women examined in clinics in Mostar, Sarajevo and Split. To implement the principles of ethical and bioethical research, approval of the ethics committee was obtai­ned. All selected patients had signed an informed consent form.

**Results:** Newborns from mothers with bad eating habits had significantly higher values of the right carotid artery intima-media thickness (p=0.046). There was a statistically significant difference in the dia­meter of the descending aorta, with larger diameters in children whose mothers had bad eating habits (p=0.021). Flow rate over pulmonary artery was higher in children from mothers with fiber-rich, lower-fat eating habits (p=0.039). Oral health was examined with the Decay-missing-filled index (DMF). Ejection fraction (FS %) was significantly higher in the group of newborns whose mothers had a larger DMF index (p=0.03).

**Conclusion:** Dietary habits and oral health of pregnant women have a significantly affect the diameter of blood vessels and flow rate and possible preterm delivery.

***Key words:*** *prematurity, cardiovascular disease, risk factors*

**„Prematuritet i kardiovaskularne bolesti – mogući novi faktori rizika”**

Senka Mesihović-Dinarević, Anes Jogunčić Grit Kristen Sarić, Liana Cambj-Sapunar, Davor Petrović, Berislav Topić, Vjekoslav Krželj, Sanja Jurišić, Senad Sarić, Lutvo Sporišević, Samir Prohić, Aida Ramić

**Uvod i cilj:** Moguća povezanost parodontnih bolesti i prehrambenih navika majke s nepovoljnim ishodom trudnoće, poput prijevremenog poroda i razlika u razvoju krvnih žila, nedavno je istražena. Cilj istraživanja je bio evaluirati povezanost oralnog zdravlja majke, prehrambenih navika tokom trudnoće s razvojem fetalnog vaskularnog sistema, posebno koronarnih i karotidnih arterija te mogućim prijevremenim porodom.

**Metode:** Dizajnirana je kohortna studija, koja uključuje 40 trudnica odabranih metodom slučajnog odabira od ukupnog broja trudnica pregledanih u klinikama u Mostaru, Sarajevu i Splitu. Za provedbu načela etičkog i bioetičkog istraživanja dobivena je saglasnost etičkog komiteta. Svi pacijenti potpisali su obrazac za informirani pristanak.

**Rezultati:** Novorođenčad majki s lošim prehrambenim navikama imala je značajno više vrijednosti debljine intime-medije desne karotidne arterije (p=0.046). Uočena je statistički značajna razlika u dijametru descendentne aorte, s većim dijametrima kod djece čije su majke imale loše prehrambene navike (p=0.021). Brzina protoka kroz plućnu arteriju bila je veća u djece majki koje su imale prehrambene navike bogate vlaknima i sa manje masti (p=0.039). Zdravlje usne šupljine ispitano je s indeksom neispunjenog propadanja (Decay-missing-filled index-DMF). Ejekcijska frakcija (FS %) bila je značajno viša u skupini djece čije su majke imale veći DMF indeks (p=0.03).

**Zaključak:** Prehrambene navike i oralno zdravlje trudnica značajno utječu na dijametar krvnih sudova i brzinu protok te mogući prijevremeni porod.

***Ključne riječi:*** *prematuritet, kardiovaskularne bolesti, riziko faktori*