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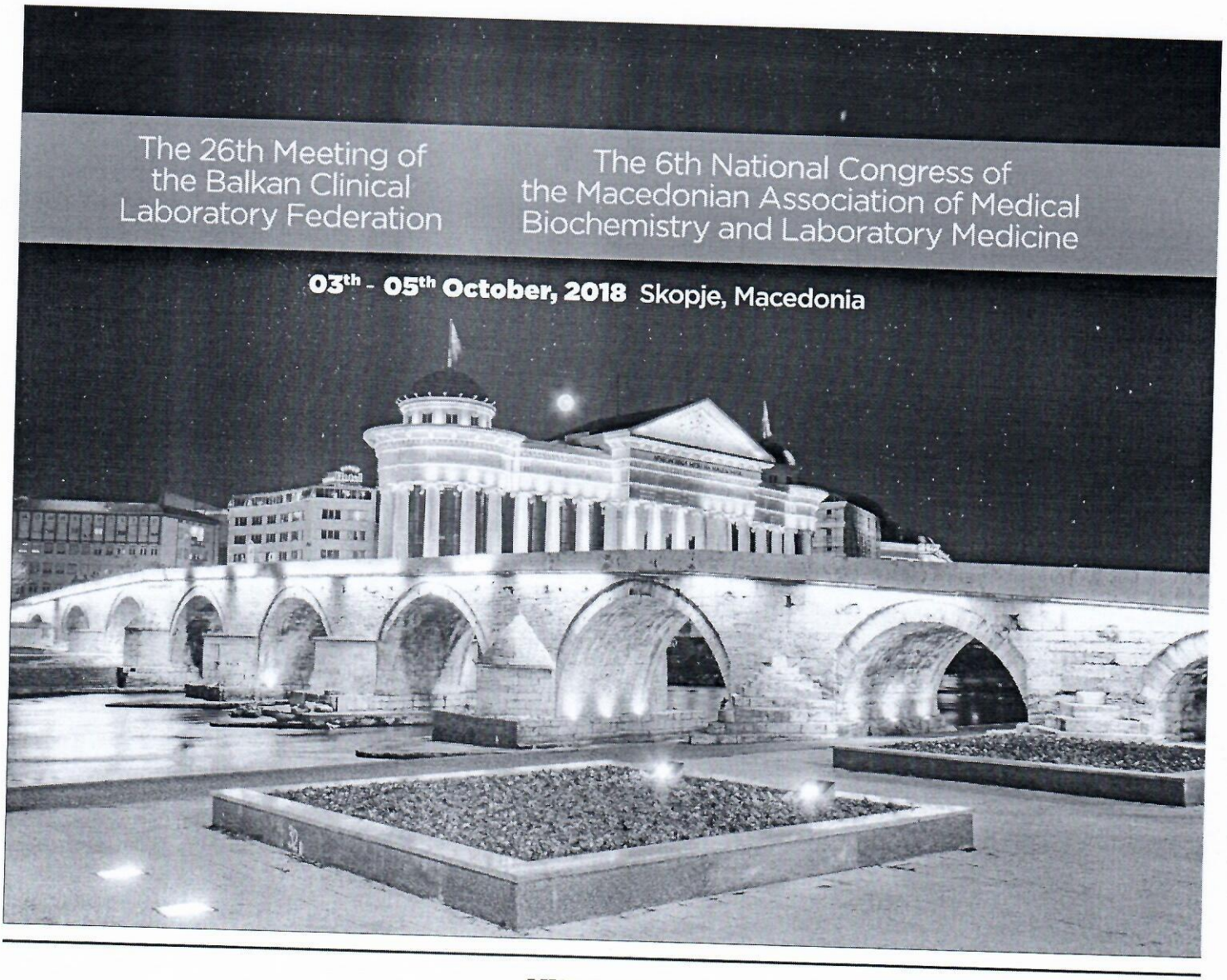

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Methods: The study includes 46 women, divided into two groups: 20 women with metabolic syndrome of age 29,16 ± 4,92 yrs. and 26 clinically healthy women of age 30.34 ± 5.76 yrs. Serum MDA is determined with an ELISA test kit (MyBioSource, USA). MDA concentrations are measured with a multiparameter photometer "Sirio S microplate reader", SEAC, Italy.

Results: Serum concentrations of MDA were significantly increased in women with metabolic syndrome compared with healthy controls (124,75 ± 46,88 vs 45.93 ± 25.10, $t = 2.265$, $P < 0.05$).

Conclusions: The MDA data we have received suggests the presence of oxidative stress in affected women and is useful in understanding the place and role of oxidative stress in metabolic syndrome.

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INCIDENCE OF CONGENITAL HYPOTHYROIDISM IN DIFFERENT REGIONS OF MACEDONIA - SIXTEEN YEARS NEWBORN THYROID SCREENING

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Aim: Neonatal thyroid screening program allows early effective diagnosis and treatment of congenital hypothyroidism (CH), the most common preventable cause for intellectual disability in children. Despite similarity in the risk factors for CH in different countries the currently reported CH incidence varies widely worldwide. The aim of this study was to evaluate the incidence of CH in different regions of the country.

Methods: Newborn thyroid screening (n=295,909) has been performed in all eight regions of Macedonia, by measuring thyroid-stimulating hormone (TSH) from blood spots on filter paper (Whatman 903), sampled 48 hours after birth, using DELFIA method, between 2002 and 2017.

Results: We detected overall incidence of congenital hypothyroidism of 1/1934 in the country with different regional distribution. The incidences of CH by regions were following: Eastern Region 1/4987, Northeastern Region 1/1449, Pelagonia Region 1/1354, Polog 1/1553, Skopje Region 1/2313, Southwestern Region 1/3260, Southeastern Region 1/1937 and Vardar Region 1/1063. Interestingly, in the Vardar Region with the highest incidence of CH we found 4.75% newborns with TSH concentration above 5 mU/L, as an indicator for the iodine status in the population, compared to the Eastern Region with the lowest incidence of CH and 1.54% newborns with TSH>5 mU/L.

Conclusions: The incidence of CH significantly varies among the regions of the country. The higher CH incidence in some of the regions may be due to increasing exposure to environmental toxic agents and/or deficient iodine intake. Further research into the potential environmental determinants of increased CH risk is warranted.