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P018
TIREOIDNI STATUS U HAŠIMOTOVOM TIREOIDITISU U TRUDNOĆI

Mirjana M. Petrović[1], Vladimir Mosurović[2], Gordana Mosurović[3], Drina Janković[4], Neda Milinković[5]

[1]Klinički centar Srbije, Beograd, Srbija
[2]Zdravstveni centar Vračar, Beograd, Srbija
[3]Dom zdravlja Stara Pazova, Srbija
[4]Univerzitet u Beogradu, Institut za nuklearne nauke Vinča, Beograd, Srbija
[5]Univerzitet u Beogradu, Farmaceutski fakultet, Beograd, Srbija

Ova prospektivna studija imala je za cilj da proceni funkciju štitaste žlezde kod trudnica obolelih od Hašimotovog tireoiditisa tokom svih trimestra, naglašavajući presudnu ulogu tireoidnih hormona u očuvanju zdravlja majke i neurokognitivnom razvoju fetusa. U istraživanje je uključeno 33 dobro kontrolisane trudnice, kod kojih je dijagnoza postavljena pre trudnoće od strane endokrinologa, a doze levotiroksina individualno prilagođavane na osnovu vrednosti TSH. Funkcija štitaste žlezde praćena je laboratorijskim testovima RIA i IRMA. Analizom su utvrđene značajne korelacije između tireoidnih hormona, autoimunih antitela i regulatora kalcijum-fosfatnog metabolizma, pri čemu je najizraženija bila negativna povezanost između TSH i TRAK, što ukazuje na patofiziološki mehanizam autoimunog procesa. Uočene su i umerene pozitivne i negativne korelacije između fT3, T3, fT4 i PTH, kao i između TBG, Tg i kalcitonina, koje potvrđuju funkcionalne odnose između tireoidnih i paratireoidnih hormona, uz uticaj metaboličkih faktora poput BMI i starosti. Rezultati ukazuju na kompleksnu mrežu hormonskih interakcija sa značajnim kliničkim potencijalom, naglašavajući važnost rane dijagnoze, individualizovane terapije i ciljanog skrininga u smanjenju rizika za majku i fetus.

P018
THYROID STATUS IN HASHIMOTO'S THYROIDITIS DURING PREGNANCY

Mirjana M. Petrović[1], Vladimir Mosurovi ć[2], Gordana Mosurović[3], Drina Janković[4], Neda Milinković[5]

[1]Clinical Centre of Serbia, Belgrade, Serbia
[2]Health Center Vračar, Belgrade, Serbia
[3]Health Center Stara Pazova, Serbia
[4]University of Belgrade, Vinča Institute of Nuclear Sciences, Belgrade, Serbia
[5]University of Belgrade, Faculty of Pharmacy, Belgrade, Serbia

This prospective study aimed to evaluate thyroid function in pregnant women with Hashimoto's thyroiditis across all trimesters, emphasizing the crucial role of thyroid hormones in maternal health and fetal neurocognitive development. A total of 33 well-controlled pregnant women, diagnosed prior to conception by an endocrinologist, were followed, with levothyroxine doses individually adjusted according to TSH levels. Thyroid status was monitored using RIA and IRMA assays. The analysis revealed significant correlations among thyroid hormones, autoimmune antibodies, and calcium-phosphate metabolism regulators, with the most pronounced finding being a strong negative association between TSH and TRAK, reflecting the pathophysiological mechanism of the autoimmune process. Moderate positive and negative correlations among fT3, T3, fT4, and PTH, as well as between TBG, Tg, and calcitonin, demonstrated functional relationships between thyroid and parathyroid hormones, while metabolic factors such as BMI and age influenced hormonal status. The results highlight a complex network of endocrine interactions with substantial clinical potential, underscoring that early diagnosis, individualized therapy, and targeted screening is essential strategies for reducing maternal and fetal risks in pregnancies complicated by Hashimoto's thyroiditis.

P019
ISPITIVANJE NIVOA CIRKULIŠUĆIH MIR-208B-3P, MIR-375-3P I MIR-452-5P KAO BIOMARKERA PATOLOŠKOG REMODELOVANJA LEVE KOMORE I DUGOROČNOG RIZIKA NAKON AKUTNOG INFARKTA MIOKARDA

Ana Nešić, Tamara Ratković, Jelena Munjas

Katedra za medicinsku biohemiju, Farmaceutski fakultet Univerziteta u Beogradu

Komplikacije u post-infarktnom periodu su posledica oštećenja i patološkog remodelovanja srca, u čije procese su uključene male, nekodirajuće RNK (miRNA). Cilj ovog rada je bio ispitati miR-208b-3p, miR-375-3p i miR-452-5p u predikciji smanjene ejekcione frakcije leve komore (left ventricular ejection fraction, LVEF≤50%) izmerene 12 meseci nakon akutnog infarkta miokarda (AIM) i povećanog GRACE 3.0 skora>8% (GRACE; jednogodišnji rizik za mortalitet nakon AIM). Pacijentima sa AIM je izmerena LVEF po hospitalizaciji (LVEF1) i 12 meseci nakon AIM (LVEF2). Relativna ekspresija miRNA 208-3p, miRNA 452-5p i miRNA 375-3p iz plazme osiromašene trombocitima (neposredno naskon AIM) je određena kvantitativnom lančanom reakcijom polimeraze u realnom vremenu (qPCR). miR-208b-3p (p=0,010), miR-452-5p (p=0,006) i miR-375-3p (p=0,025) su bile više u grupi pacijenata sa LVEF2≤50% u odnosu na grupu sa LVEF2>50%. Značajni nezavisni prediktori LVEF2≤50% bili su: LVEF1 (OR=0,816), hsCRP (OR=2,417) i miR-375-3p (OR=3,107), a njihovim integrisanjem dobijena je ROC kriva sa najboljim dijagnostičkim performansama (AUC; 95% CI:0,825 (0,751–0,900)). Značajno viši nivoi miR-208b-3p (p=0,045), miR-452-5p (p=0,036) i miR-375-3p (p=0,013) su uočeni u grupi sa GRACE>8% u odnosu na grupu GRACE≤8%, pri čemu je miR-375-3p bila nezavisni prediktor GRACE>8% (OR=3,420). miR-375-3p je nezavisni prediktor nepovoljnog remodelovanja leve komore miokarda i povećanog jednogodišnjeg rizika za smrtnost u post-infarktnom periodu.

P019
INVESTIGATION OF CIRCULATING MIR-208B-3P, MIR-375-3P AND MIR-452-5P AS BIOMARKERS OF ADVERSE LEFT VENTRICULAR REMODELING AND LONG-TERM RISK AFTER ACUTE MYOCARDIAL INFARCTION

Ana Nešić, Tamara Ratković, Jelena Munjas

Department of Medical Biochemistry, Faculty of Pharmacy University of Belgrade

Clinical complications in the post-infarction period are the result of necrosis and adverse remodeling, in which small non-coding RNAs (miRNAs) play a significant role. The aim of this study was to examine miR-208b-3p, miR-375-3p and miR-452-5p in predicting the development of significant left ventricular systolic dysfunction (LVEF≤50%) measured 12 months after the acute myocardial infarction (AMI) and their association with a high GRACE 3.0 1-year mortality risk score (GRACE). Patients with AMI had their ejection fraction measured upon hospitalization (LVEF1) and 12 months after AMI (LVEF2). Relative expression of miRNA 208-3p, miRNA 452-5p and miRNA 375-3p was determined from platelet-poor plasma by qPCR. miR-208b-3p (p=0.010), miR-452-5p (p=0.006), miR-375-3p (p=0.025) were significantly upregulated in LVEF2≤50% compared to LVEF>50% group. Significant independent predictors of LVEF2≤50% were: LVEF1 (OR=0.816), hsCRP (OR=2.417), miR-375-3p (OR=3.107) and their integration resulted in ROC curve with excellent diagnostic performances (AUC; 95% CI:0,825 (0,751–0,900)). miR-208b-3p (p=0.045), miR-452-5p (p=0.036), miR-375-3p (p=0.013) were significantly upregulated in GRACE>8% compared to GRACE≤8%; miR-375-3p was an independent predictor of GRACE >8% (OR=3.420). miR-375-3p in patients with AMI is a strong independent predictor of adverse myocardial remodeling and increased one-year mortality risk in the post-infarction period.

P020
ENDOKRINO-GENETSKA OSA MUŠKE NEPLODNOSTI: Y HROMOZOM, MIKRODELECIJE I HORMONSKA NERAVNOTEŽA

Munevera Zejnilović, Sanja Borozan, Nihad Zejnilović, Dusan Perović, Iman Zejnilović

Daily Hospital »Dr Zejnilović«, Bar, Montenegro

Muška neplodnost predstavlja značajan klinički i javnozdravstveni problem sa multifaktorijalnom etiologijom, pri čemu azoospermija i teška oligozoospermija predstavljaju njene najteže oblike. Savremeni dijagnostički pristup zasniva se na kombinaciji hormonske procjene i molekularno-genetičkog testiranja, sa posebnim naglaskom na otkrivanje mikrodelecija Y hromozoma, koje se nalaze kod približno 7–15% neplodnih muškaraca. U ovom radu prikazan je slučaj 25-godišnjeg muškarca sa primarnom neplodnošću i potvrđenom azoospermijom. Ultrazvučnim pregledom utvrđen je smanjen volumen testisa, dok je hormonska analiza pokazala povišene vrijednosti gonadotropina (FSH i LH), uz snižene vrijednosti testosterona i inhibina B, što odgovara hipergonadotropnom hipogonadizmu. Molekularno-genetičkom analizom pomoću lančane reakcije polimeraze (PCR) utvrđena je mikrodelecija u AZFa regiji Y hromozoma, odnosno gubitak lokusa SY84 i SY86. Ovaj nalaz potvrđuje tešku primarnu insuficijenciju testisa, sa gotovo potpunim odsustvom spermatogeneze i veoma lošom prognozom za hirurško dobijanje spermatozoida. Ovi nalazi naglašavaju ključni značaj integrisanog endokrinogenetskog pristupa u procjeni muške neplodnosti, ne samo radi tačnog utvrđivanja njenog uzroka, već i radi donošenja odgovarajućih kliničkih odluka, izbjegavanja nepotrebnih invazivnih procedura i omoguć avanja pravovremenog genetskog savjetovanja. Pored toga, novija istraživanja ukazuju na sve značajniju ulogu epigenetskih mehanizama i novih biomarkera u regulaciji spermatogeneze, što pruža obećavajuće mogućnosti za razvoj novih dijagnostičkih i terapijskih pristupa u budućnosti.

P020
ENDOCRINE-GENETIC AXIS OF MALE INFERTILITY: Y CHROMOSOME, MICRODELETIONS AND HORMONAL IMBALANCE

Munevera Zejnilović, Sanja Borozan, Nihad Zejnilović, Dusan Perović, Iman Zejnilović

Daily Hospital »Dr Zejnilović«, Bar, Montenegro

Male infertility represents a significant clinical and public health concern with a multifactorial etiology, where azoospermia and severe oligozoospermia constitute its most severe forms. The contemporary diagnostic approach relies on the integration of hormonal evaluation and molecular genetic testing, with particular emphasis on the detection of Y chromosome microdeletions, which are identified in approximately 7–15% of infertile men. This study presents a case of a 25-year-old male with primary infertility and confirmed azoospermia. Ultrasound examination revealed reduced testicular volume, while hormonal analysis demonstrated elevated gonadotropins (FSH and LH), along with decreased testosterone and inhibin B levels, consistent with hypergonadotropic hypogonadism. Molecular genetic analysis using polymerase chain reaction (PCR) identified a microdeletion in the AZFa region of the Y chromosome (loss of SY84 and SY86 loci), confirming severe primary testicular insufficiency with nearly complete absence of spermatogenesis and a very poor prognosis for surgical sperm retrieval. These findings highlight the critical importance of an integrated endocrine-genetic approach in the evaluation of male infertility, not only for accurate etiological classification but also for guiding clinical decision-making, avoiding unnecessary invasive procedures, and enabling timely genetic counseling. Furthermore, emerging evidence suggests an increasing role of epigenetic mechanisms and novel biomarkers in the regulation of spermatogenesis, offering promising perspectives for the development of innovative diagnostic and therapeutic strategies in the future.