



# GODIŠNJAK KBC "DR DRAGIŠA MIŠOVIĆ - DEDINJE"



ZBORNİK SAŽETAKA PUBLIKOVANIH  
NAUČNO-ISTRAŽIVAČKIH I STRUČNIH RADOVA  
ZAPOSLENIH ZDRAVSTVENIH RADNIKA I SARADNIKA  
U 2016. GODINI



## MISIJA

Naša misija je briga o pacijentima uz korišćenje savremenih zdravstvenih tehnologija u skladu sa standardima kvalitetne i bezbedne zdravstvene zaštite sekundarnog i tercijarnog nivoa, nastavljajući naučnoistraživački rad i obrazovanje studenata u dodiplomskoj i poslediplomskoj nastavi.

## VIZIJA

Prepoznatljivost u obezbeđivanju zdravstvene zaštite sekundarnog i tercijarnog nivoa, svim građanima u skladu sa usvojenim standardima kvalitetne i bezbedne zdravstvene zaštite i visokim renomeom naučnoistraživačke i obrazovne delatnosti.

### GODIŠNJAK KBC "DR DRAGIŠA MIŠOVIĆ-DEDINJE"

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Glavni i odgovorni urednik:

Sanja Ivanković, master menadžer u zdravstvu



"Učenje je kao veslanje uzvodno: čim se prestane, odmah se kreće nazad".

Lao Ce

Zaposleni u KBC "Dr Dragiša Mišović-Dedinje" su i u 2016. godini opravdali renome institucije koja ide u korak sa dinamikom promena, stalno zanavlja bazu znanja i širi opseg usluga u skladu sa najnovijim naučno-tehnološkim dostignućima.


U prethodne dve godine, a tako i danas, naš Godišnjak je ogledalo vrednog i upornog zalaganja zaposlenih, da pored svakodnevnih obaveza, daju svoj doprinos naučno-istraživačkoj zajednici, kako na nacionalnom, tako i na međunarodnom nivou. Ove godine, sa ponosom možemo reći da je Zbornik sažetaka publikovanih naučno-istraživačkih i stručnih radova zaposlenih zdravstvenih radnika i saradnika bogatiji nego do sada, sa većim brojem radova i iz godine u godinu pokazuje trend rasta. Prezentovani rezimei mogu doprineti profesionalnoj nadgradnji našim studentima i stručnoj javnosti, a pacijentima i prijateljima Ustanove pokazati da, kako Lao Ce reče, ne prestajemo veslati u uzburkanom moru promena i napretka.

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**ORIGINALNI RADOVI IN  
EXTENSO  
U ČASOPISIMA SA JCR  
(JOURNAL CITATION REPORTS)  
LISTE**



## The international primary ciliary dyskinesia cohort (iPCD Cohort): methods and first results

*M Goutaki, E Maurer, F. S. Halbeisen, I Amirav, A Barbato, M Boon, C Casaulta, A Clement, S Crowley, E Haarman, C Hogg, B Karadag, C Koerner-Rettberg, M. W. Leigh, M. R. Loebinger, H Mazurek, L Morgan, K. G. Nielsen, H Omran, N Schwerk, S Scigliano, C Werner, P Yiallourous, Z Zivkovic, J. S. Lucas and C. E. Kuehni*

ERJ Express. Published on December 22, 2016 as doi: 10.1183/13993003.01181-2016

M21	IF: 8.332
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### Abstract

Data on primary ciliary dyskinesia (PCD) epidemiology is scarce and published studies are characterised by low numbers. In the framework of the European Union project BESTCILIA we aimed to combine all available datasets in a retrospective international PCD cohort (iPCD Cohort).

We identified eligible datasets by performing a systematic review of published studies containing clinical information on PCD, and by contacting members of past and current European Respiratory Society Task Forces on PCD. We compared the contents of the datasets, clarified definitions and pooled them in a standardised format.

As of April 2016 the iPCD Cohort includes data on 3013 patients from 18 countries. It includes data on diagnostic evaluations, symptoms, lung function, growth and treatments. Longitudinal data are currently available for 542 patients. The extent of clinical details per patient varies between centres. More than 50% of patients have a definite PCD diagnosis based on recent guidelines. Children aged 10–19 years are the largest age group, followed by younger children ( $\leq 9$  years) and young adults (20–29 years).

This is the largest observational PCD dataset available to date. It will allow us to answer pertinent questions on clinical phenotype, disease severity, prognosis and effect of treatments, and to investigate genotype–phenotype correlations.

## Influence of White-Coat Hypertension on Left Ventricular Deformation 2- and 3-Dimensional Speckle Tracking Study

*Tadic M, Cuspidi C, Ivanovic B, Ilic I, Celic V, Kocijancic V.*

Hypertension. 2016 Mar;67(3):592-6.

M21	IF: 6.350
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### Abstract

We sought to compare left ventricular deformation in subjects with white-coat hypertension to normotensive and sustained hypertensive patients. This cross-sectional study included 139 untreated subjects who underwent 24-hour ambulatory blood pressure monitoring and completed 2- and 3-dimensional examination. Two-dimensional left ventricular multilayer strain analysis was also performed. White-coat hypertension was diagnosed if clinical blood pressure was elevated and 24-hour blood pressure was normal. Our results showed that left ventricular longitudinal and circumferential strains gradually decreased from normotensive controls across subjects with white-coat hypertension to sustained hypertensive group. Two- and 3-dimensional left ventricular radial strain, as well as 3-dimensional area strain, was not different between groups. Two-dimensional left ventricular longitudinal and circumferential strains of subendocardial and mid-myocardial layers gradually decreased from normotensive control to sustained hypertensive group.

Longitudinal and circumferential strains of subepicardial layer did not differ between the observed groups. We concluded that white-coat hypertension significantly affects left ventricular deformation assessed by 2-dimensional traditional strain, multilayer strain, and 3-dimensional strain.



## Galectin-3 and Hypertensive Heart Disease

*Cuspidi C, Tadic M, Sala C.*

J Clin Hypertens (Greenwich). 2016 Jun;18(6):503-5.

M21	IF: 5.062
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### Abstract

**AIMS:** In heart failure, a holistic approach incorporating the patient's perspective is vital for prognosis and treatment. Self-rated health has strong associations with adverse events and short-term mortality risk, but long-term data are limited. We investigated the predictive value of two consecutive self-rated health assessments with regard to long-term mortality in a large, well characterised sample of elderly patients with stable chronic heart failure.

**METHODS AND RESULTS:** We measured self-rated health by asking 'In general, would you say your health is: 1, excellent; 2, very good; 3, good; 4, fair; 5, poor?' twice: at baseline and the end of a 12-week beta-blocker up-titration period in the CIBIS-ELD trial. Mortality was assessed in an observational follow-up after 2-4 years. A total of 720 patients (mean left ventricular ejection fraction  $45\pm 12\%$ , mean age  $73\pm 5$  years, 36% women) rated their health at both time points. During long-term follow-up, 144 patients died (all-cause mortality 20%). Fair/poor self-rated health in at least one of the two reports was associated with increased mortality (hazard ratio 1.42 per level; 95% confidence interval 1.16-1.75;  $P < 0.001$ ). It remained independently significant in multiple Cox regression analysis, adjusted for N-terminal pro B-type natriuretic peptide (NTproBNP), heart rate and other risk prediction covariates. Self-rated health by one level worse was as predictive for mortality as a 1.9-fold increase in NTproBNP.

**CONCLUSION:** Poor self-rated health predicts mortality in our long-term follow-up of patients with stable chronic heart failure, even after adjustment for established risk predictors. We encourage clinicians to capture patient-reported self-rated health routinely as an easy to assess, clinically meaningful measure and pay extra attention when self-rated health is poor.

## Prevalence and correlates of new-onset left ventricular geometric abnormalities in a general population: the PAMELA study

*Cuspidi C, Facchetti R, Bombelli M, Sala C, Tadic M, Grassi G, Mancia G.*

J Hypertens. 2016 Jul;34(7):1423-31.

M21	IF: 5.062
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### Abstract

**AIM:** We sought to evaluate new-onset abnormal LV (left ventricle) patterns and their correlates over a 10-year period in members of the general population enrolled in the Pressioni Arteriose Monitorate e Loro Associazioni study.

**METHODS:** The study included 817 patients with normal LV geometry at baseline evaluation having a readable echocardiogram at the end of follow-up. Cut-points for abnormal LV geometric patterns were derived from reference values of the healthy fraction of the Pressioni Arteriose Monitorate e Loro Associazioni population.

**RESULTS:** Over a 10-year period 39% of participants progressed to abnormal LV geometric patterns as follows: LV concentric remodelling (15.2%), eccentric dilated left ventricular hypertrophy (LVH) (8.4%), concentric LVH (7.9%), eccentric nondilated LVH (6.8%), and concentric dilated LVH (0.7%). Age [odds ratio (OR): 1.039; 95% confidence interval (CI) 1.023-1.056,  $P<0.0001$ ], LV mass index (OR: 1.039; 95% CI 1.026-1.052,  $P<0.0001$ ), night-time SBP (OR: 1.024; 95% CI 1.005-1.043,  $P=0.01$ ), office SBP changes during follow-up (OR: 1.017 95% CI 1.007-1.028,  $P=0.001$ ), and BMI (OR: 1.067; 95% CI 1.017-1.120,  $P=0.009$ ) emerged as key correlates of new-onset abnormal LV geometry. Age and LV mass index turned out to be strong determinants of all sub-types of LVH; whereas blood pressure, BMI, and sex exhibited a different predictive value across the various LV geometric patterns.

**CONCLUSIONS:** Our study provides the first evidence that long-term changes from normal cardiac morphology toward abnormal LV geometry represent a clinically relevant phenomenon at the community level. From a practical perspective this finding reinforces the concept that life-style changes and pharmacologic treatment aimed to reduce over-weight/obesity and optimize blood pressure are of paramount importance for prevention of subclinical cardiac damage.

## New-onset left atrial enlargement in a general population

*Bombelli M, Cuspidi C, Facchetti R, Sala C, Tadic M, Brambilla G, Re A, Villa P, Grassi G, Mancina G.*

J Hypertens. 2016 Sep;34(9):1838-45.

M21	IF: 5.062
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### Abstract

**AIM:** Increased left atrium diameter (LAD) is associated with elevated risk of cardiovascular morbidity and mortality. We evaluated new-onset left atrium enlargement (LAE) and their correlates over a 10-year period in participants of the general population enrolled in the Pressioni Monitorate e Loro Associazioni study.

**METHODS:** The study included 1045 participants with normal LAD at baseline evaluation having a readable echocardiogram at the end of follow-up. Cut-points for abnormal LAD were derived from reference values recommended by American Society of Echocardiography.

**RESULTS:** Over a 10-year period, 123 participants (11.8%) progressed to LAE. The incidence of new-onset LAE increased significantly from the lowest to the highest tertile of baseline office, home and 24-h blood pressure (BP); BMI; fasting blood glucose and left ventricular mass index (LVMI). In multivariate analysis, baseline LAD [odds ratio (OR) 3.18, confidence interval (CI) 2.26-4.47,  $P < 0.001$ ], female sex (OR 3.68, CI 2.20-6.18,  $P < 0.001$ ), office SBP (OR 1.36, CI 1.08-1.70,  $P = 0.008$ ), BMI (OR 1.35, CI 1.07-1.69,  $P = 0.01$ ) and LVMI (OR 1.29, CI 1.01-1.64,  $P = 0.04$ ) emerged as key correlates of new-onset LAE.

**CONCLUSION:** The study shows that in the population, long-term changes from normal LAD to LAE are independently driven by several risk factors such as the female sex and an increased baseline LAD, BMI, LVMI and BP, with no predictive superiority of home and ambulatory versus office values. Preventing BP elevations, overweight/obesity and left ventricular hypertrophy may thus all be important for LAE prevention.

# Evaluation of the Endorsement of the STrengthening the REporting of Genetic Association Studies (STREGA) Statement on the Reporting Quality of Published Genetic Association Studies

*Nedovic D, Panic N, Pastorino R, Ricciardi W, Boccia S*

J Epidemiol. 2016 Aug 5;26(8):399-404.

M21	IF: 2.546
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## Abstract

The STrengthening the REporting of Genetic Association studies (STREGA) statement was based on the STrengthening the REporting of OBServational studies in Epidemiology (STROBE) statement, and it was published in 2009 in order to improve the reporting of genetic association (GA) studies. Our aim was to evaluate the impact of STREGA endorsement on the quality of reporting of GA studies published in journals in the field of genetics and heredity (GH). Quality of reporting was evaluated by assessing the adherence of papers to the STREGA checklist. After identifying the GH journals that endorsed STREGA in their instructions for authors, we randomly appraised papers published in 2013 from journals endorsing STREGA that published GA studies (Group A); in GH journals that never endorsed STREGA (Group B); in GH journals endorsing STREGA, but in the year preceding its endorsement (Group C); and in the same time period as Group C from GH journals that never endorsed STREGA (Group D). The STREGA statement was referenced in 29 (18.1%) of 160 GH journals, of which 18 (62.1%) journals published GA studies. Among the 18 journals endorsing STREGA, we found a significant increase in the overall adherence to the STREGA checklist over time (A vs C;  $P < 0.0001$ ). Adherence to the STREGA checklist was significantly higher in journals endorsing STREGA compared to those that did not endorse the statement (A vs B;  $P = 0.04$ ). No significant improvement was detected in the adherence to STREGA items in journals not endorsing STREGA over time (B vs D;  $P > 0.05$ ). The endorsement of STREGA resulted in an increase in quality of reporting of GA studies over time, while no similar improvement was reported for journals that never endorsed STREGA.

## The Association between Obesity, Blood Pressure Variability, and Right Ventricular Function and Mechanics in Hypertensive Patients

*Tadic M, Cuspidi C, Vukomanovic V, Kocijancic V, Celic V, Stanisavljevic D.*

J Am Soc Echocardiogr. 2016 Aug;29(8):802-11.

M21	IF: 2.254
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### Abstract

**BACKGROUND:** The purpose of this investigation was to evaluate the association between blood pressure (BP) variability and right ventricular (RV) mechanical function in normal-weight, overweight, and obese untreated patients with hypertension.

**METHODS:** This retrospective cross-sectional study included 127 untreated subjects with hypertension who underwent 24-hour ambulatory BP monitoring and complete two-dimensional and three-dimensional echocardiographic examination. All participants were divided into three groups according to body mass index (BMI): normal-weight patients ( $\text{BMI} < 25 \text{ kg/m}^2$ ), overweight patients ( $25 \leq \text{BMI} < 30 \text{ kg/m}^2$ ), and obese patients ( $\text{BMI} \geq 30 \text{ kg/m}^2$ ).

**RESULTS:** Daytime, nighttime, and 24-hour BP variability parameters were higher in overweight and obese subjects with hypertension than in lean subjects. Two-dimensional RV longitudinal strain and systolic strain rate were significantly lower in obese patients with hypertension than in normal-weight patients ( $-24.1 \pm 3\%$  vs  $-23.3 \pm 3.2\%$  vs  $-21.7 \pm 3.3\%$ ,  $P = .004$ ).

Three-dimensional echocardiographic RV volumes indexed to body surface area were lower in lean and overweight subjects than in obese participants with hypertension (mean RV end-diastolic volume index,  $65 \pm 6$  vs  $67 \pm 7$  vs  $71 \pm 8 \text{ mL/m}^2$ ,  $P = .001$ ), while three-dimensional RV ejection fraction decreased in the same direction ( $60 \pm 4\%$  vs  $58 \pm 3\%$  vs  $57 \pm 3\%$ ,  $P < .001$ ). Nighttime BP variability indices, more than daytime BP variability parameters, correlated with two-dimensional RV global longitudinal strain and three-dimensional echocardiographic RV volumes.

**CONCLUSIONS:** BP variability and RV structure, function, and mechanics are significantly affected by obesity in patients with untreated hypertension. BP variability is significantly associated with RV remodeling in patients with hypertension.

## Beneficial and harmful effects of exercise in hypertensive patients: the role of oxidative stress

*Dekleva M, Lazic JS, Arandjelovic A, Mazic S.*

Hypertens Res. 2016 Jul 21. doi: 10.1038/hr.2016.90. [Epub ahead of print]

M22	IF: 3.208
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### Abstract

Oxidative stress has been implicated in the development and progression of hypertension. This review presents a comprehensive summary of original investigations focused on exercise-induced oxidative stress in hypertensive individuals. Single bouts of exercise can induce an acute state of oxidative stress. Chronic low-to-moderate exercise training improves the antioxidative defense and reduces the disease severity. However, the data that are currently available on the chronic intensive interval training-induced modification of the redox state in hypertensive patients are insufficient to draw adequate conclusions.

## The influence of type 2 diabetes and arterial hypertension on right ventricular layer-specific mechanics

*Tadic M, Cuspidi C, Vukomanovic V, Ilic S, Celic V, Obert P, Kocijancic V.*

Acta Diabetol. 2016 Oct;53(5):791-7.

M22	IF: 3.074
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### Abstract

**AIMS:** The aim of the investigation was to evaluate layer-specific right ventricular (RV) deformation in normotensive and hypertensive subjects with type 2 diabetes mellitus (DM).

**METHODS:** This cross-sectional study included 129 subjects (40 controls, 42 normotensive DM and 47 hypertensive DM patients) who underwent complete two-dimensional echocardiographic examination (2DE) including multilayer strain analysis.

**RESULTS:** 2DE RV global and free wall longitudinal strains were reduced in normotensive and hypertensive DM subjects than in controls. RV global longitudinal layer-specific strains (endo-, mid- and epicardial) were lower in normotensive and hypertensive DM patients than in controls. On the other side, layer-specific strains of RV free wall were lower in hypertensive DM patients than in controls, without significant difference between controls and normotensive DM subjects. Parameters of DM control (fasting glucose and glycosylated hemoglobin) were associated with 2DE RV global longitudinal endo- and mid-myocardial layer strain.

**CONCLUSIONS:** Diabetes and hypertension significantly influence RV mechanics assessed by 2DE conventional and 2DE multilayer strain. Hypertension has an additive unfavorable influence on RV deformation in diabetic patients. Laboratory parameters of diabetic control were associated with RV structure, diastolic function and mechanics assessed with complex 2DE strain analysis.

## Does masked hypertension impact left ventricular deformation?

*Tadic M, Cuspidi C, Vukomanovic V, Celic V, Tasic I, Stevanovic A, Kocijancic V.*

J Am Soc Hypertens. 2016 Sep;10(9):694-701.

M22	IF: 2.656
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### Abstract

Our aim was to compare left ventricular (LV) deformation in subjects with masked hypertension (MH) to normotensive and sustained hypertensive patients. This cross-sectional study included 185 untreated subjects who underwent 24-hour ambulatory blood pressure (BP) monitoring and complete two-dimensional echocardiographic (2DE) examination including multilayer strain analysis. MH was diagnosed if clinic BP was normal ( $<140/90$  mm Hg), and 24-hour BP was increased ( $\geq 130/80$  mm Hg). 2DE LV longitudinal and circumferential strains gradually and significantly decreased from normotensive controls across MH individuals to sustained hypertensive patients. 2DE radial strain was not different between groups. 2DE longitudinal and circumferential endocardial and midmyocardial layer strains progressively decreased from normotensive control to sustained hypertensive individuals. Longitudinal and circumferential epicardial layer strains were lower in sustained hypertensive patients than in normotensive controls. Clinic and 24-hour systolic BP were associated with 2DE LV longitudinal endocardial strain, midmyocardial strain, and 2DE circumferential endocardial strain in the whole-study population independent of LV structure and diastolic function. MH significantly affect LV deformation assessed by 2DE traditional strain and 2DE multilayer strain. Clinic and 24-hour systolic BP were associated with LV mechanics evaluated with comprehensive 2DE strain analysis independent of LV structure and diastolic function.



## The influence of masked hypertension on the right ventricle: is everything really masked?

*Tadic M, Cuspidi C, Vukomanovic V, Celic V, Pavlovic T, Kocijancic V.*

J Am Soc Hypertens. 2016 Apr;10(4):318-24.

M22	IF: 2.656
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### Abstract

We sought to investigate right ventricular (RV) structure, function, and mechanics in subjects with masked hypertension (MH), normotensive, and sustained hypertensive patients. This cross-sectional study included 186 untreated subjects who underwent 24-hour ambulatory blood pressure (BP) monitoring and complete two-dimensional echocardiographic (2DE) examination including multilayer strain analysis. MH was diagnosed if clinic BP was normal ( $<140/90$  mm Hg) and 24-hour BP was increased ( $\geq 130/80$  mm Hg). Global and free-wall RV longitudinal strains were significantly lower in MH and sustained hypertensive patients comparing with controls. Systolic and early diastolic RV strain rates were lower, whereas late diastolic strain rate was higher, among patients with MH and sustained hypertension than in control group. Endocardial and midmyocardial RV strains were also significantly lower in MH and hypertensive patients. There was no difference between MH and subjects with sustained hypertension. RV structure, function, and deformation are significantly changed in subjects with MH and sustained hypertension

## Does QRS Voltage Correction by Body Mass Index Improve the Accuracy of Electrocardiography in Detecting Left Ventricular Hypertrophy and Predicting Cardiovascular Events in a General Population?

*Cuspidi C, Facchetti R, Bombelli M, Sala C, Tadic M, Grassi G, Mancia G.*

J Clin Hypertens (Greenwich). 2016 May;18(5):415-21.

M22	IF: 2.549
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### Abstract

The authors assessed the value of body mass index (BMI) correction of two electrocardiographic criteria in improving detection of left ventricular hypertrophy (LVH) and prediction of cardiovascular and all-cause mortality in the Italian study Pressioni Arteriose Monitorate E Loro Associazioni (PAMELA) population. At entry, 1549 patients underwent diagnostic tests, 24-hour ambulatory blood pressure (BP) monitoring, standard electrocardiography, and echocardiography. The BMI-corrected Cornell voltage and Sokolow-Lyon voltage criteria provided better results for detection of echocardiographic LVH as compared with unadjusted electrocardiographic parameters. Cornell voltage index, but not Sokolow-Lyon index, was associated with an increased risk of cardiovascular events (and all-cause mortality). The adjusted risk of cardiovascular events related to one-standard deviation increment of BMI-corrected Cornell voltage was similar to that conferred by the uncorrected criterion in the total population, but outperformed in obese participants. These findings show that correction for BMI may improve the diagnostic accuracy of Cornell voltage index in detecting LVH and prediction of cardiovascular mortality in obese individuals.

## Nocturnal Hypertension and Subclinical Cardiac and Carotid Damage: An Updated Review and Meta-Analysis of Echocardiographic Studies

*Cuspidi C, Sala C, Tadic M, Gherbesi E, Grassi G, Mancia G.*

J Clin Hypertens (Greenwich). 2016 Sep;18(9):913-20.

M22	IF: 2.549
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### Abstract

Evidence on the association of nocturnal hypertension (NH) with subclinical cardiac and vascular damage is scanty. The authors performed a meta-analysis to provide comprehensive information on this clinically relevant issue. Full articles providing data on subclinical cardiac and carotid damage as assessed by ultrasonographic methods in patients with NH as compared with patients with nocturnal normotension (NN) were considered. A total of 3657 patients (NH=2083, NN=1574) of both sexes were included in seven studies. Left ventricular mass index was higher in individuals with NH than in those with NN ( $112\pm 4.7$  g/m<sup>2</sup> vs  $98\pm 4.8$  g/m<sup>2</sup>); standard mean difference [SMD],  $0.54\pm 0.16$ ; confidence interval [CI], 0.23-0.85;  $P<.01$ ). Similarly, common carotid intima-media thickness was greater in patients with NH than in those with NN ( $751\pm 34$   $\mu$ m vs  $653\pm 14$   $\mu$ m; SMD,  $0.44\pm 0.08$ ; CI, 0.29-0.59;  $P<.01$ ). The present meta-analysis shows an association between NH pattern and increased likelihood of cardiac and carotid structural alterations.

## The Impact of White-Coat Hypertension on Cardiac Mechanics

*Tadic M, Cuspidi C, Ivanovic B, Vukomanovic V, Djelic M, Celic V, Kocijancic V.*

J Clin Hypertens (Greenwich). 2016 Jul;18(7):617-22.

M22	IF: 2.549
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### Abstract

The authors aimed to investigate right ventricular (RV) and left ventricular (LV) remodeling in patients with white-coat hypertension (WCH) and sustained arterial hypertension. This cross-sectional study included 153 untreated patients who underwent 24-hour ambulatory blood pressure (BP) monitoring and complete two-dimensional echocardiographic (2DE) examination. Results showed that LV and RV longitudinal mechanics gradually deteriorated from controls to patients with sustained hypertension. Endocardial RV longitudinal strain was lower in WCH and hypertensive patients than in controls. Midmyocardial RV longitudinal strain was decreased in hypertensive patients compared with the other two groups, whereas subepicardial RV longitudinal strain was similar between the observed groups. Twenty-four-hour systolic BP was associated with 2DE global longitudinal LV and subendocardial RV strain. This study demonstrates that myocardial deformation of both ventricles is significantly impaired in patients with WCH and sustained arterial hypertension, and 24-hour systolic BP is associated with LV and RV deformation independent of cardiac structure.

## Masked Hypertension and Left Atrial Dysfunction: A Hidden Association

*Tadic M, Cuspidi C, Radojkovic J, Rihor B, Kocijanic V, Celic V.*

J Clin Hypertens (Greenwich). 2016 Aug 22. doi: 10.1111/jch.12901. [Epub ahead of print]

M22	IF:2.549
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### Abstract

Masked hypertension (MH) is a clinical condition that indicates normal values of clinic blood pressure (BP) but elevated 24-hour BP. The purpose of this study was to investigate the relationship between MH and left atrial (LA) phasic function evaluated by both the volumetric and speckle tracking method. This cross-sectional study included 49 normotensive individuals, 50 patients with MH, and 70 untreated sustained hypertensive patients adjusted by age and sex. MH was diagnosed if clinic BP was normal and 24-hour BP was increased. LA reservoir function was lower in patients with MH and those with sustained hypertension compared with the normotensive group. LA conduit function gradually decreased, while LA booster pump function progressively increased, from normotension to sustained hypertension. Similar results were obtained by two-dimensional echocardiographic strain analysis. Independently of main clinic and echocardiographic characteristics, 24-hour systolic BP was associated with LA passive ejection fraction, LA total longitudinal strain, LA positive longitudinal strain, and LA stiffness index. In conclusion, MH is associated with impairment of LA phasic function and stiffness, and 24-hour systolic BP increment was closely related with LA remodeling.

## Hypertension and cognitive dysfunction in elderly: blood pressure management for this global burden

*Tadic M, Cuspidi C, Hering D*

BMC Cardiovasc Disord. 2016 Nov 3;16(1):208.

M22	IF:1.916
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### Abstract

Arterial hypertension and stroke are strong independent risk factors for the development of cognitive impairment and dementia. Persistently elevated blood pressure (BP) is known to impair cognitive function, however onset of new cognitive decline is common following a large and multiple mini strokes. Among various forms of dementia the most prevalent include Alzheimer's disease (AD) and vascular dementia (VaD) which often present with similar clinical symptoms and challenging diagnosis. While hypertension is the most important modifiable vascular risk factor with antihypertensive therapy reducing the risk of stroke and potentially slowing cognitive decline, optimal BP levels for maintaining an ideal age-related mental performance are yet to be established. Cognition has improved following the use of at least one representative agent of the major drug classes with further neuroprotection with renin angiotensin inhibitors and calcium channel blockers in the hypertensive elderly. However, a reduction in BP may worsen cerebral perfusion causing an increased risk of CV complications due to the J-curve phenomenon. Given the uncertainties and conflicting results from randomized trials regarding the hypertension management in the elderly, particularly octogenarians, antihypertensive approaches are primarily based on expert opinion. Herein, we summarize available data linking arterial hypertension to cognitive decline and antihypertensive approach with potential benefits in improving cognitive function in elderly hypertensive patients.

## The relationship between heart rate variability and left ventricular layer-specific deformation in uncomplicated diabetic patients

*Vukomanovic V, Tadic M, Suzic-Lazic J, Kocijancic V, Celic V.*

Int J Cardiovasc Imaging. 2016 Nov 16. [Epub ahead of print]

M22	IF:1.880
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### Abstract

The aim of this study was to investigate heart rate variability (HRV) and left ventricular (LV) remodeling in uncomplicated diabetic patients. Furthermore, we sought to investigate the association between HRV indices and LV structural, functional and mechanical parameters. This cross-sectional study included 50 uncomplicated patients with type 2 diabetes and 40 healthy controls without cardiovascular risk factors. All study subjects underwent 24-h Holter monitoring, laboratory analyses and complete two-dimensional echocardiography examination (2DE). LV structure and diastolic function were significantly deteriorated in the diabetic patients comparing with the controls. LV global longitudinal, circumferential and radial strains were significantly reduced in the diabetic group. LV endocardial, mid-miocardial and epicardial longitudinal and circumferential strains were significantly decreased, whereas LV twist was significantly increased, in the diabetic patients; 24-h, daytime and nighttime heart rates were higher in the diabetic patients. All parameters of time and frequency domain of HRV were reduced in the diabetic subjects. LV mass index, mitral E/e' ratio and 2DE LV endocardial and mid-miocardial longitudinal and circumferential strains correlated with HRV parameters. A multivariate regression analysis showed that E/e' ratio and 2DE LV layer-specific strains were associated with HRV parameters independently of age, BMI, systolic blood pressure and LV mass index. HRV and LV mechanics are significantly deteriorated in uncomplicated diabetic individuals. Parameters of LV remodeling are independently associated with HRV indices, which could indicate the importance of HRV determination in diabetics.

## The relationship between blood pressure variability, obesity and left atrial phasic function in hypertensive population

*Tadic M, Cuspidi C, Ilic I, Suzic-Lazić J, Zivanovic V, Jozika L, Celic V.*

Int J Cardiovasc Imaging. 2016 Apr;32(4):603-12.

M22	IF:1.880
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### Abstract

We sought to investigate the relationship between blood pressure (BP) variability and left atrial (LA) phasic function assessed by volumetric and speckle tracking method in normal-weight, overweight and obese hypertensive patients. This cross-sectional study included 164 untreated hypertensive subjects who underwent a 24-h ambulatory BP monitoring and complete two-dimensional echocardiographic examination (2DE). All the patients were separated into three groups according to their body mass index (BMI): normal-weight patients ( $BMI < 25 \text{ kg/m}^2$ ), overweight patients ( $25 \leq BMI < 30 \text{ kg/m}^2$ ), and obese patients ( $BMI \geq 30 \text{ kg/m}^2$ ). Daytime, nighttime and 24 h BP variability indices were higher in obese hypertensive subjects than in lean patients. Maximum and minimum LA volumes and volume indexes gradually and significantly increased, whereas pre-A LAV decreased, from normal-weight to obese subjects. Total and passive LA emptying fractions, representing LA reservoir and conduit function, gradually reduced from lean to obese individuals. Active LA EF, the parameter of LA booster pump function, increased in the same direction. Similar results were obtained by 2DE strain analysis. BP variability parameters were associated with structural, functional and mechanical parameters of LA remodeling in the whole study population. The parameters of LA reservoir function were negatively related with BP variability indices, whereas the parameters of LA pump function were positively related with BP variability indices. Obesity significantly impacts BP variability and LA phasic function in untreated hypertensive subjects. BP variability is associated with LA remodeling independent of BP, left ventricular systolic and diastolic function.



## Soluble ST2 Levels and Left Ventricular Structure and Function in Patients With Metabolic Syndrome

*Celic V, Majstorovic A, Pencic-Popovic B, Sljivic A, Lopez-Andres N, Roy I, Escribano E, Beunza M4, Melero A, Floridi F, Magrini L, Marino R, Salerno G, Cardelli P, Di Somma S.*

Ann Lab Med. 2016 Nov;36(6):542-9.

M22	IF: 1.87
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### Abstract

**OBJECTIVES:** Right heart function and mechanics have not been investigated in patients with subclinical **BACKGROUND:** A biomarker that is of great interest in relation to adverse cardiovascular events is soluble ST2 (sST2), a member of the interleukin family. Considering that metabolic syndrome (MetS) is accompanied by a proinflammatory state, we aimed to assess the relationship between sST2 and left ventricular (LV) structure and function in patients with MetS.

**METHODS:** A multicentric, cross-sectional study was conducted on 180 MetS subjects with normal LV ejection fraction as determined by echocardiography. LV hypertrophy (LVH) was defined as an LV mass index greater than the gender-specific upper limit of normal as determined by echocardiography. LV diastolic dysfunction (DD) was assessed by pulse-wave and tissue Doppler imaging. sST2 was measured by using a quantitative monoclonal ELISA assay.

**RESULTS:** LV mass index ( $\beta=0.337$ ,  $P<0.001$ , linear regression) was independently associated with sST2 concentrations. Increased sST2 was associated with an increased likelihood of LVH [Exp (B)=2.20,  $P=0.048$ , logistic regression] and increased systolic blood pressure [Exp (B)=1.02,  $P=0.05$ , logistic regression]. Comparing mean sST2 concentrations (adjusted for age, body mass index, gender) between different LV remodeling patterns, we found the greatest sST2 level in the group with concentric hypertrophy. There were no differences in sST2 concentration between groups with and without LV DD.

**CONCLUSIONS:** Increased sST2 concentration in patients with MetS was associated with a greater likelihood of exhibiting LVH. Our results suggest that inflammation could be one of the principal triggering mechanisms for LV remodeling in MetS.

## Chromatin Fractal Organization, Textural Patterns, and Circularity of Nuclear Envelope in Adrenal Zona Fasciculata Cells

*Pantic I, Nestic D, Basailovic M, Cetkovic M, Mazic S, Suzic-Lazic J, Popevic M.*

Microsc Microanal. 2016 Nov 8:1-8. [Epub ahead of print]

M22	IF: 1.730
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### Abstract

Despite previous research efforts in the fields of histology and cell physiology, the relationship between chromatin structural organization and nuclear shape remains unclear. The aim of this research was to test the existence and strength of correlations between mathematical parameters of chromatin microarchitecture and roundness of the nuclear envelope. On a sample of 240 nuclei of adrenal zona fasciculata cells stained using the DNA-specific Feulgen method, we quantified fractal parameters such as fractal dimension and lacunarity, as well as textural parameters such as angular second moment (ASM), entropy, inverse difference moment, contrast, and variance. Circularity of the nuclear envelope was determined from the nuclear area and perimeter. The results indicate that there is a statistically significant negative correlation between chromatin ASM and circularity. Moreover, there was a statistically significant positive correlation between chromatin fractal dimension and envelope circularity. This is the first study to demonstrate these relationships in adrenal tissue, and also one of the first studies to test the connection between circularity and fractal and gray-level co-occurrence matrix parameters in DNA-specific Feulgen stain. The results could be useful both as an addition to the current knowledge on chromatin/nuclear envelope interactions, and for design of future computer-assisted research software for evaluation of nuclear morphology.

## How Does Subclinical Hyperthyroidism Affect Right Heart Function and Mechanics?

*Tadic M, Celic V, Cuspidi C, Ilic S, Zivanovic V, Marjanovic T.*

J Ultrasound Med. 2016 Feb;35(2):287-95.

M22	IF: 1.544
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### Abstract

**OBJECTIVES:** Right heart function and mechanics have not been investigated in patients with subclinical hyperthyroidism. Our aim was to investigate right ventricular (RV) and right atrial (RA) function and deformation as evaluated by 3-dimensional echocardiography (3DE) and speckle-tracking 2-dimensional echocardiography (2DE) in these individuals.

**METHODS:** We included 39 untreated women with endogenous subclinical hyperthyroidism and 39 healthy women matched by age. All participants underwent laboratory analyses that included thyroid hormone levels and comprehensive 2DE and 3DE examinations.

**RESULTS:** Three-dimensional echocardiographic RV volumes were significantly elevated in the patients with subclinical hyperthyroidism ( $P < .05$ ), whereas the 3DE RV ejection fraction was reduced in this group, but with borderline significance. Two-dimensional echocardiographic longitudinal RV and RA strain were significantly reduced in the patients with subclinical hyperthyroidism. Two-dimensional echocardiographic RV systolic and early diastolic strain rates were reduced, whereas late diastolic strain rates were increased in the patients with subclinical hyperthyroidism. The same changes were detected in RA mechanics among the patients with subclinical hyperthyroidism. The thyrotropin (TSH) level correlated with the left ventricular mass index, transmitral early diastolic peak flow velocity (E)/late diastolic flow velocity (A) ratio, tricuspid E/A ratio, 2DE RV global strain, 2DE RA strain, and 3DE RV end-diastolic volume. A multivariate regression analysis showed that the mitral E/A ratio, 2DE RV global strain, and 3DE RV end-diastolic volume were independently associated with the TSH level.

**CONCLUSIONS:** Right ventricular and RA function as evaluated by 3DE and speckle-tracking 2DE is significantly impaired in patients with subclinical hyperthyroidism. The TSH level correlated with parameters for RV function and mechanics in the whole study population.

## Prognostic Significance of Cereblon Expression in Patients With Multiple Myeloma

*Bila J, Sretenovic A, Jelacic J, Tosic N, Glumac I, Fekete MD, Antic D, Balint MT, Markovic O, Milojevic Z, Radojkovic M, Trajkovic G, Puric M, Pavlovic S, Mihaljevic B.*

Clin Lymphoma Myeloma Leuk. 2016 Nov;16(11):610-615.

M23	IF: 2.316
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### Abstract

**BACKGROUND:** To personalize the treatment approach for patients with multiple myeloma (MM), molecular markers such as cereblon (CRBN) are currently the focus of investigation. The aim of the present study was to test the prognostic significance of CRBN expression in MM patients ineligible for autologous stem cell transplantation (ASCT).

**PATIENTS AND METHODS:** The data from 92 previously untreated patients were analyzed. The distribution according to the International Staging System score was 26.1%, 30.4%, and 43.5% with a score of 1, 2, and 3, respectively. Thalidomide- and bortezomib-based combinations were used in 83.7% and 16.3% of the patients, respectively.

**RESULTS:** A treatment response (complete remission, very good partial remission, partial remission) was achieved in 83.7% of the patients and correlated with high CRBN expression ( $P = .006$ ), mainly in the patients treated with thalidomide ( $P = .028$ ). Low CRBN expression affected progression-free survival (PFS;  $P = .017$ ) but not overall survival (OS) in patients treated with thalidomide and had no influence on OS in the bortezomib group. In the Cox regression model, low CRBN expression was the most important prognostic parameter that influenced PFS in the thalidomide-treated patients ( $P = .012$ ).

**CONCLUSION:** CRBN expression is of prognostic value in MM patients ineligible for ASCT treated with thalidomide as an immunomodulatory drug. With low expression indicating a possible suboptimal treatment outcome, measurement of CRBN expression might serve as additional prognostic tool in the personalized treatment approach.

## The influence of white-coat hypertension on left atrial phasic function

*Tadic M, Cuspidi C, Pencic B, Rihor B, Radojkovic J, Kocijanic V, Celic V.*

Blood Press. 2016 Aug 16:1-7. [Epub ahead of print]

M23	IF: 2.010
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### Abstract

We aimed to investigate the association between white-coat hypertension (WCH) and left atrial (LA) phasic function assessed by the volumetric and speckle tracking method. This cross-sectional study included 52 normotensive individuals, 49 subjects with WCH and 56 untreated hypertensive patients who underwent a 24-h ambulatory BP monitoring and complete two-dimensional echocardiographic examination (2DE). WCH was diagnosed if clinic blood pressure (BP) was elevated and 24-h BP was normal. We obtained that maximum, minimum LA and pre-A LAV volumes and volume indexes gradually and significantly increased from the normotensive subjects, throughout the white-coat hypertensive individuals to the hypertensive patients. Passive LA emptying fraction (EF), representing the LA conduit function, gradually reduced from normotensive to hypertensive subjects. Active LA EF and the parameter of the LA booster pump function increased in the same direction. Similar results were obtained by 2DE strain analysis. The LA stiffness index gradually increased from normotensive controls, throughout white-coat hypertensive subjects to hypertensive patients. Clinic systolic BP was associated with LA passive EF ( $\beta = -0.283$ ,  $p = 0.001$ ), LA active EF ( $\beta = 0.342$ ,  $p < 0.001$ ), LA total longitudinal strain ( $\beta = -0.356$ ,  $p < 0.001$ ), LA positive longitudinal strain ( $\beta = -0.264$ ,  $p = 0.009$ ) and LA stiffness index ( $\beta = 0.398$ ,  $p < 0.001$ ) without regard to age, BMI, left ventricular structure and diastolic function in the whole study population. In the conclusion, WCH significantly impacts LA phasic function and stiffness. Clinic systolic BP was associated with functional and mechanical LA remodeling in the whole study population.

## Right ventricular remodeling and updated left ventricular geometry classification: is there any relationship?

*Tadic M, Cuspidi C, Vukomanovic V, Kocijancic V, Celic V.*

Blood Press. 2016 Oct;25(5):292-7.

M23	IF: 2.010
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### Abstract

**OBJECTIVE:** We sought to evaluate right ventricular (RV) structure and function in hypertensive patients with various left ventricular (LV) geometric patterns using an updated classification for LV geometry.

**METHODS:** This cross-sectional study included 232 hypertensive subjects. All the subjects underwent complete two-dimensional (2D) and three-dimensional (3D) echocardiographic examination. Using LV mass index, LV end-diastolic diameter and relative wall thickness, according to the updated classification, all subjects were divided into six different groups: normal LV geometry, concentric remodeling, eccentric LV hypertrophy (LVH), concentric, dilated, and concentric-dilated LVH.

**RESULTS:** RV wall thickness was increased in concentric and concentric-dilated LVH compared with normal LV geometry and LV concentric remodeling. RV longitudinal function was reduced in concentric and concentric-dilated patients compared with other hypertensive groups. 3D RV volumes were significantly higher in eccentric, dilated, and concentric-dilated LVH hypertensive subjects. Conversely, 3D RV ejection fraction was lower in these groups.

**CONCLUSION:** RV longitudinal myocardial function and 3D RV function are significantly influenced by LV geometry in hypertensive patients. RV remodeling is the most pronounced in the patients with concentric, dilated, and concentric-dilated LVH geometric patterns.

## Does Left Ventricular Geometric Patterns Impact Right Atrial Phasic Function? Findings from the Hypertensive Population

*Tadic M, Cuspidi C, Kocijancic V, Celic V, Vukomanovic V.*

Echocardiography. 2016 Aug;33(8):1186-94.

M23	IF: 1.432
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### Abstract

**OBJECTIVE:** The aim of the study was to evaluate right atrial (RA) phasic function in hypertensive patients with different left ventricular (LV) geometric patterns by using two-dimensional (2DE) and three-dimensional (3DE) echocardiography.

**METHODS:** This cross-sectional study involved 177 hypertensive patients who underwent 2DE and 3DE examination. The updated criteria of LV geometry that included LV mass index, LV end-diastolic diameter, and relative wall thickness were applied. Using this classification, patients were separated into six groups: normal geometry, concentric remodeling, eccentric nondilated LV hypertrophy (LVH), concentric LVH, dilated LVH, and concentric-dilated LVH.

**RESULTS:** Two-dimensional echocardiography and 3DE RA volumes were significantly higher in concentric and dilated LVH than in other LV geometric types. RA reservoir function, estimated by total 2DE and 3DE RA emptying fraction (EF), was decreased in subjects with dilated LVH compared with normal geometric and concentric LV remodeling patterns. RA conduit function assessed with 2DE and 3DE RA passive EF, gradually reduced from normal LV geometry to dilated LVH. RA pump function was increased in patients with concentric and dilated LVH than in subjects with normal LV geometry and concentric remodeling. 2DE strain analysis confirmed these findings about RA phasic function. Concentric LVH and dilated LVH were associated with RA enlargement and dysfunction irrespectively of main demographic and clinical parameters.

**CONCLUSION:** Left ventricular geometric patterns have significant impact on RA phasic function in hypertensive patients. Concentric and dilated LVH patterns have the most prominent negative effect on RA morphological and functional remodeling.

## Improvement of Glycemic Control in Insulin-Dependent Diabetics with Depression by Concomitant Treatment with Antidepressants

*Radojkovic J, Sikanic N, Bukumiric Z, Tadic M, Kostic N, Babic R.*

Med Sci Monit. 2016 Jun 22;22:2133-43.

M23	IF: 1.405
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### Abstract

It is still disputable whether negative effects of comorbid depression in diabetics can be diminished by successful treatment of depression. The primary aim of this study was to assess whether addition of antidepressants to existing insulin treatment would further improve glycemic control in these patients. A secondary objective was to assess whether such treatment impairs their lipid and inflammatory status. **MATERIAL AND METHODS** Total of 192 patients with poorly controlled diabetes (defined as HbA1c  $\geq 8\%$ ) in the absence of any uncontrolled medical condition entered the 6-month run-in phase with optimization of diabetic therapy. Depression status was screened at the end of this phase by BDI-II depression testing. Patients with BDI-II  $\geq 14$  and psychiatric confirmation of depression (58 patients) entered the 6-month interventional phase with SSRI class antidepressants. **RESULTS** Fifty patients completed the study. During the run-in phase, HbA1c dropped from  $10.0 \pm 1.8\%$  to  $8.5 \pm 1.2\%$  ( $p < 0.001$ ), and during the interventional phase it dropped from  $8.5 \pm 1.2\%$  to  $7.7 \pm 0.7\%$  ( $p < 0.001$ ). BDI-II scores improved significantly from  $30.4 \pm 13.2$  to  $23.5 \pm 11.0$  ( $p = 0.02$ ) during the interventional phase. A positive linear correlation between improvement in depression scale and improvement in glycemic control was observed ( $R^2 = 0.139$ ,  $p = 0.008$ ). Lipid profile and inflammatory status did not change significantly during the interventional phase. **CONCLUSIONS** Patients with poorly controlled diabetes and comorbid depression might benefit from screening and treatment of depression with SSRI antidepressants by achieving an incremental effect on glycoregulation. This therapy did not have any adverse effects on lipid profile or inflammatory status.



## Insights into body composition adaptation: should we reconsider the use of Body Mass Index in some sports?

*Durmić T, Djelić M, Suzić Lazić J, Lazović Popović B, Dekleva M, Soldatovic I, Mazić S.*

J Sports Med Phys Fitness. 2016 Nov;56(11):1331-1338.

M23	IF: 1.11
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### Abstract

**BACKGROUND:** The purposes of this study were to identify the under/overweight/obese frequencies by Body Mass Index (BMI) and body fat percentage (BF%) in athletes within groups of sport and to investigate the accuracy of the BMI as a measure of BF%.

**METHODS:** Cross-sectional design study on elite male athletes (N.=2234, aged 22±4 years) from 51 sports disciplines who were classified according to two different sport classifications: predominant characteristic of training (four group model) and type and intensity of exercise (nine group model). All athletes underwent full anthropometric testing.

**RESULTS:** After stratification, the majority of athletes were in normal weight category. According to 4 group model, BMI is showed as statistically significant, reliable and independent predictor of BF% in all groups of sports. In nine groups model all correlated parameters were positive for athletes being statistically significant ( $P<0.001$ ) with exception of group LSMD, MSMD and HSMD ( $P>0.05$ ). The highest positive correlation between BMI and BF% was in group MSLD ( $r=0.53$ ;  $P<0.001$ ) and in power sports group ( $r=0.24$ ;  $P<0.001$ ).

**CONCLUSIONS:** BMI could be an accurate predictor of BF% in athletes but that depends on group of sport. Our results suggest the BMI could use only in power and MSLD groups of sport..

## Subclinical hyperthyroidism and biatrial function and mechanics: a two- and three-dimensional echocardiographic study

*Tadic M, Cuspidi C, Ilic S, Marjanovic T, Celic V, Trpkovic S.*

Scand Cardiovasc J. 2016;50(2):88-98.

M23	IF: 1.093
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### Abstract

**BACKGROUND:** We sought to evaluate left atrial (LA) and right atrial (RA) phasic function and deformation in the subclinical hyperthyroidism (SCH) using two- and three-dimensional echocardiographic (2DE and 3DE) methods.

**METHODS:** We included 45 untreated women with SCH and 45 healthy women who underwent comprehensive 2DE and 3DE examination.

**RESULTS:** Total and passive LA emptying fractions (EF) were decreased, whereas active EF was increased among the SCH participants. RA total EFs were similar between the controls and the SCH subjects; passive EF was reduced; and active EF was amplified in the SCH group. TSH correlated with 2DE LA passive and active EFs, 3DE LA total, passive and active EFs, as well as 2DE LA positive longitudinal strain. Additionally, TSH correlated with 2DE RA passive and active EFs, 3DE LA and RA passive EF, 2DE LA and RA positive longitudinal strain. However, after adjustment for the parameters of left and right ventricular diastolic function and structure, the TSH level remained associated only with LA conduit and booster pump functions, as well as RA pump function.

**CONCLUSION:** Biatrial phasic function evaluated by 2DE and 3DE is significantly impaired in the SCH subjects. TSH level correlates with LA and RA conduit and pump functions.

## Sublingual immunotherapy in children

*Djurić-Filipović I, Živković Z.*

World J Pediatr 2016;12(3):283-290

M23	IF: 1.025
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### Abstract

**Background:** The incidence of asthma and allergic rhinitis (AR) is significantly increased, especially in younger children. Current treatment for children with asthma and allergic rhinitis include allergen avoidance, standard pharmacotherapy, and immunotherapy. Since standard pharmacotherapy is prescribed for symptoms, immunotherapy at present plays an important role in the treatment of allergic diseases. This article presents insights into the up-to-date understanding of immunotherapy in the treatment of children with allergic rhinitis and asthma. **Data sources:** PubMed articles published from 1990 to 2014 were reviewed using the MeSH terms "asthma", "allergic rhinitis", "children", and "immune therapy". Additional articles were identified by hand searching of the references in the initial search. **Results:** Numerous studies have shown that sublingual application of allergen specific immunotherapy (SLIT) is an adequate, safe and efficient substitution to subcutaneous route of allergens administration (SCIT) in the treatment of IgE-mediated respiratory tract allergies in children. According to the literature, better clinical efficacy is connected with the duration of treatment and monosensitized patients. **Conclusions:** At least 3 years of treatment and stable asthma before the immunotherapy are positive predictors of good clinical efficacy and tolerability of SLIT. SLIT reduces the symptoms of allergic diseases and the use of medicaments, and improves the quality of life of children with the diseases.

## Analysis of malignancy predictors for oxyphile thyroid tumors

*Zivic R, Diklic A, Sipetic-Grujicic S, Paunovic I, Vekic B, Perunovic R, Radovanovic D, Zivaljevic V.*

J BUON December 2016; 21(6): .

M23	IF: 0.88
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### Abstract

The authors estimated the risk of cardiovascular mortality associated with echocardiographic (ECHO) left ventricular hypertrophy (LVH) and subtypes of this phenotype in patients with and without electrocardiographic (ECG) LVH. A total of 1691 representatives of the general population were included in the analysis. During a follow-up of 211 months, 89 cardiovascular deaths were recorded. Compared with individuals with neither ECHO LVH nor ECG LVH, fully adjusted risk of cardiovascular mortality increased (hazard ratio [HR], 3.36; 95% confidence interval [CI], 1.51-7.47;  $P=.003$ ) in patients with both ECHO-LVH and ECG-LVH, whereas the risk entailed by ECHO-LVH alone was of borderline statistical significance ( $P=.04$ ). Combined concentric nondilated LVH and ECG-LVH, but not concentric nondilated LVH alone, predicted cardiovascular death (HR, 3.79; 95% CI, 1.25-11.38;  $P=.01$ ). Similar findings were observed for eccentric nondilated LVH (HR, 3.37; 95% CI, 1.05-10.78;  $P=.04$ ). The present analysis underlines the value of combining ECG and ECHO in the assessment of cardiovascular prognosis related to abnormal left ventricular geometric patterns.

## Musculoskeletal Pain and Vitamin D Deficiency in Children: A Pilot Follow-up Study of Vitamin D Therapy in Musculoskeletal/Orthopedic Conditions

*Blagojevic Z, Nikolic V, Kistic-Tepavcevic D, Terzic-Supic Z, Kovacevic R, Zivkovic Z, Stevanovic D.*

Acta Chir Orthop. 2016, vol. 83: 21-26. PubMed ID: 26936061

M23	IF: 0.552
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### Abstract

The authors estimated the risk of cardiovascular mortality associated with echocardiographic (ECHO) left ventricular hypertrophy (LVH) and subtypes of this phenotype in patients with and without electrocardiographic (ECG) LVH. A total of 1691 representatives of the general population were included in the analysis. During a follow-up of 211 months, 89 cardiovascular deaths were recorded. Compared with individuals with neither ECHO LVH nor ECG LVH, fully adjusted risk of cardiovascular mortality increased (hazard ratio [HR], 3.36; 95% confidence interval [CI], 1.51-7.47;  $P=.003$ ) in patients with both ECHO-LVH and ECG-LVH, whereas the risk entailed by ECHO-LVH alone was of borderline statistical significance ( $P=.04$ ). Combined concentric nondilated LVH and ECG-LVH, but not concentric nondilated LVH alone, predicted cardiovascular death (HR, 3.79; 95% CI, 1.25-11.38;  $P=.01$ ). Similar findings were observed for eccentric nondilated LVH (HR, 3.37; 95% CI, 1.05-10.78;  $P=.04$ ). The present analysis underlines the value of combining ECG and ECHO in the assessment of cardiovascular prognosis related to abnormal left ventricular geometric patterns.

## Anorectal melanoma and seborrheic dermatitis – Report of a case

*Vekić B, Živić R, Kalezić M, Otašević S, Arsić-Arsenijević V*

Srp Arh Celok Lek. 2016 May-Jun;144(5-6):334-338

M23	IF: 2.277
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### Abstract

**Introduction:** Anorectal melanoma (ARM) is a rare and aggressive neoplasm with predisposition for early infiltration, distant spread, and unfavorable prognosis. It has been speculated that *Malassezia* yeasts could possibly have an impact on skin carcinogenesis and development of melanoma, especially in patients with seborrheic dermatitis (SD), due to production of aryl hydrocarbon receptor (AhR) agonists. **Case Outline:** A 52-year-old man with intensive SD complained of a four-month-long rectal bleeding, tenesmus, pain, and difficulty during defecation. On examination, a rectal tumor was detected and histopathology of tumor tissue revealed ARM with positive protein S100, melanoma antigen HMB45 and melan-A expression. After the diagnosis was established, abdominoperineal resection of the anus and rectum was performed, since the tumor was large, obstructive, and the anal sphincter was invaded.

**Conclusion:** Because of the possible impact of intensive SD to the cross-link between *Malassezia* yeasts AhR agonists and skin carcinogenesis, we discussed on this matter and reviewed the literature data regarding ARM. In addition to “pathogenic” and “non-pathogenic” *Malassezia* subtypes based on AhR agonist production, future studies on *Malassezia* metabolites, their carcinogenic effect in the skin and development of melanoma are needed. If the cross-link between *Malassezia* AhR agonists and skin carcinogenesis exists, timely prevention of ARM could be done with *Malassezia* eradication, especially in patients with severe SD.

## Benign cystic teratoma of the mesosigmoid – Report of a case

*Vekić B, Živić R, Kalezić M, Matic P*

Srp Arh Celok Lek. 2016 Sep-Oct;144(9-10):550-552

M23	IF: 0.277
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### Abstract

**Introduction:** Extragonadal intraperitoneal teratomas are very rare, especially those arising from mesentery and mesocolon. In the contemporary literature only 22 cases of such tumors have been published and described.

**Case Outline:** We report a case of a 52-year-old woman with a benign cystic teratoma of the mesosigmoid. The patient presented with mild clinical signs of intestinal obstruction. Computerized tomography of the pelvis and abdomen showed a large  $9.7 \times 8.9 \times 9.4$  cm calcified tumor in the lower part of the left hemiabdomen. Extraluminal obstruction was verified by colonoscopy at 35 cm from the anal verge. Intraoperatively, a cystic calcified tumor of the mesosigmoid was found causing extraluminal obstruction of the left colon. The tumor was extirpated and a partial resection of the adherent great omentum was performed. The histopathological examination revealed a benign cystic teratoma.

**Conclusion:** Considering the fact that mesenteric teratomas are extremely rare tumors, it is difficult to designate a general conclusion for an adequate treatment of patients suffering from them. Complete surgical excision is indicated in order to establish a correct histopathological diagnosis and to relieve the patients of symptoms.

## Current issues on sublingual allergen-specific immunotherapy in children with asthma and allergic rhinitis

*Živković Z, Djurić-Filipović I, Živanović S*

Srp Arh Celok Lek. 2016;144(5-6):345-350.

M23	IF: 0.277
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### Abstract

#### SUMMARY

In 1993 the European Academy of Allergy and Clinical Immunology was the first official organization to recognize that sublingual administration could be “promising route” for allergic desensitization. A few years later, the World Health Organization recommended this therapy as “a viable alternative to the injection route in adults.” The first meta-analysis showed sublingual allergen specific immunotherapy (SLIT) effectiveness for allergic rhinitis and another study showed SLIT can actually help prevent the development of asthma both in adults and in children. The main goal of this review article is to present insight into the most up-to-date understanding of the clinical efficacy and safety of immunotherapy in the treatment of pediatric patients with allergic rhinitis and asthma. A literature review was performed on PubMed from 1990 to 2015 using the terms “asthma,” “allergic rhinitis,” “children,” “allergen specific immune therapy.” Evaluating data from double-blind placebo-controlled randomized clinical trials (DB-PC-RCTs), the clinical efficacy (assessed as the reduction of symptom score and the need of rescue medication) of SLIT for allergic rhinitis and allergic asthma, has been confirmed in various meta-analysis Outcomes such as rhinoconjunctivitis score and medication scores, combined scores, quality of life, days with severe symptoms, immunological endpoints, and safety parameters were all improved in the SLIT-tablet compared with placebo group. SLIT safety has been already proven in many DB-PC-RCTs and real-life settings. In accordance with all of the above mentioned, the goals for future trials and studies are the development of comprehensive guidelines for clinical practice on immunotherapy, embracing all the different potential participants. The importance of allergen immunotherapy is of special relevance in the pediatric age, when the plasticity and modulability of the immune system are maximal, and when preventative effects can be reasonably expected.

Keywords: allergen immunotherapy; children; asthma; allergic rhinitis





**CEO RAD U ČASOPISU KOJI NIJE  
UKLJUČEN U PRETHODNO  
NAVEDENE BAZE PODATAKA**



## Our progress against polio – eradication still remains challenge

*Đurić-Filipović I, Filipović Đ, Tasić M, Živković Z.*

Prev Ped, 2016; 2 (1-2): 24-28

### Abstract

Polioviruses are enteroviruses that are transmitted direct from person to person or following excretion in feces or pharyngeal secretions. Because the poliovirus receptor is only expressed on human cells or on cells of few subhuman primate species, eradication is possible. In 1988 the Global Initiative for Polio Eradication (GIPE) at the 41st WHO summit announced that the main goal for 2000 is complete polio eradication. According the CDC reports the aim has not been reached yet, although the incidence of polio cases were decreased from 350,000 cases of wild polio virus in more than 125 endemic countries in 1988 to only 400 cases of polio reported in only 3 endemic countries (Nigeria, Afghanistan and Pakistan) in 2000. The last case of wild polio virus (wPV) was detected in 1997 in Serbia. In order to eradicate polio virus two vaccines are used- inactivated and live-attenuated polio vaccines. According to the studies oral polio vaccine has better efficacy and immunogenicity profile in comparison to inactivated polio vaccines, but due to safety reasons inactivated polio vaccine is now widely used (there is no risk of vaccine associated paralytic polio - VAPP and vaccine derived polio virus- VDPV). Although there are very effective and immunogenic vaccines available all over the world the polio eradication is not a simple project, in undeveloped and developing countries vaccines are not available, whereas in developed countries parents refused to vaccinate their children.

Keywords: children, polio virus, vaccination

## Aktuelni problemi u dijagnostici i terapiji alergijskih bolesti

*Đurić-Filipović I, Kostić G, Filipović Đ, Živković Z*

NČ urgent medic HALO 194, 2016;22(2):163-17.

### Sažetak

Alergijske bolesti respiratornih puteva u pedijatriji su veliki izazov za medicinsku naučnu javnost. Uprkos dostupnim dijagnostičkim i terapijskim mogućnostima, još uvek ne možemo biti upotpunosti zadovoljni kontrolom ovih bolesti u smislu poboljšanja kvaliteta života, te smanjenja morbiditeta i mortaliteta. Tome doprinosi velika varijabilnost individualnih faktora rizika. Dobro poznavanje multifaktorijalne etiologije alergijskih bolesti može da pomogne u primarnoj prevenciji, ranoj intervenciji i modulaciji bolesti. Najveći broj trenutnih istraživanja je fokusiran na identifikaciju bioloških i kliničkih prediktivnih pokazatelja alergije i astme. Cilj ovog revijalnog rada je da ukaže na najnovija saznanja o kompleksnoj vezi između genetske predispozicije i faktora sredine, kao i da prouči njihov međusobni uticaj na prevenciju i ranu detekciju pacijenata sa rizikom. Pored toga dat je i osvrt na najnovije dijagnostičke i terapijske mogućnosti u oblasti dečije astme.

Ključne reči: respiratorni put, alergije, biomarkeri, detinjstvo, dijagnostika, okruženje, kvalitet života, prediktivni faktori rizika, terapija

## Gojaznost kod dece – prevencija

*Jasmina Jocić Sojanović, Vesna Veković, Zorica Živković, Andreja Prijčić*

Prev Ped, 2016; 2 (1-2): 17-20

### Sažetak

U poslednje tri decenije zabeležen je porast prevalencije gojaznosti kod dece širom sveta, sa brojnim konsekvencama po zdravlje. Gojaznost je prepoznata kao jedan od najvažnijih problema i izazova javnog zdravlja u 21. veku. Kontrolom faktora rizika, u koje spada i gojaznost, ostvarila bi se prevencija brojnih hroničnih bolesti. Epidemiološka istraživanja identifikovala su faktore rizika za nastanak gojaznosti u dečjem uzrastu, koji se mogu svrstati u tri velike grupe: demografski, navike u vezi sa fizičkom aktivnošću, navike u vezi sa ishranom. Posebno je značajna činjenica da se radi o faktorima koji su potencijalno podložni modifikaciji. U skladu sa time, potrebna je intervencija na nivou celokupne društvene zajednice kako bi se omogućila edukacija roditelja i dece o zdravim životnim navikama uz dostupnost sadržaja za fizičku aktivnost kao i redovne kontakte sa medicinskim stručnjacima.

Ključne reči: deca, gojaznost, prevencija

## Novine u prevenciji i lečenju alergijske kijavice kod dece

*Zorica Živković, , Jasmina Jocić Sojanović, Vesna Veković, Olivera Ostojić*

Prev Ped 2016; 2 (1-2): 29-32.

### Sažetak

Alergijski rinitis pogađa više od 500 miliona ljudi širom sveta I može se smatrati vodećim hroničnim respiratornim poremećajem zbog svoje učestalosti, uticaja na kvalitet života, ekonomske važnosti, uticaja na radne/školske sposobnosti, kao i povezanosti sa astmom. Prevalencija alergijskog rinitisa je i dalje u porastu. Terapijske mogućnosti AR rinitisa (ARIA) su brojne i podrazumevaju : 1) edukaciju pacijenta; 2) prevenciju izlaganja alergenima iz okoline i iritansima; 3) farmakološku terapiju; 4) imunoterapiju. Ipak, oko 20% pacijenta lečenih prema smernicama vodiča za AR nemaju adekvatnu kontrolu simptoma bolesti, te terapija AR i dalje predstavlja izazov za kliničare. Zbog toga treba imati na umu i duge terapijske mogućnosti, te poboljšati dostupnost imunoterapije i novih modaliteta u lečenju AR.

Ključne reči: alergijska kijavica, prevencija, lečenje, deca

## Kašalj i kada je prevencija moguća?

*Vesna Veković , Jasmina Jocić Stojanović , Zorica Živković , Olivera Ostojić ,  
Borko Veković, Milena Tomašević*

Prev Ped 2016; 2 (1-2): 33-36

### Sažetak

U pedijatrijskoj populaciji, kašalj je ubedljivo najčešći simptom i znak odgovora respiratorne sluznice na različite agense. Kašalj je zaštitni, odbrambeni refleksni mehanizam, kojim se obezbeđuje čišćenje i prolaznost disajnih puteva, pomaže evakuisanje nakupljenog sekreta ili stranog tela, iritanasa i patogenih čestica iz disajnih puteva. Značaj odbrambene funkcije kašlja i primer sniženih odgovora receptora na kašalj, vidi se u bolestima u kojima je kašalj neefikasan, gde je senzitivnost refleksa snižena, zbog bolesti kao što su generalizovane mišićne distrofije, traheobronhomalacija, disfunkcija larinksa. Vrlo je važno postaviti dijagnozu bolesti, koja je uzrok kašlju i lečiti naravno, osnovnu bolest. Detaljna anamneza, klinički pregled i adekvatna ispitivanja neophodni su za uvođenje ciljane terapije. Kod velikog broja bolesnika, kašalj je posledica više udruženih bolesti, od kojih su u najvećem broju zastupljeni postinfektivna bronhijalna preosetljivost, astma i postanazalno slivanje sekreta, gastro-ezofagealni reflux. Kašalj je koristan refleksni mehanizam, u većini slučajeva ne treba ga suzbijati i lečiti. Sam po sebi, kašalj nije bolest, ali ako se javlja često, dugo traje, ometa aktivnosti, treba ga proceniti adekvatno i koliko god je moguće prema uzroku lečiti. Prevencija kašlja koji se karakteriše kao patološki podrazumeva: opšte mere prevencije, vakcinaciju, hemiopofilaksu, imunoterapiju, mere kontrole sredine i izbegavanje alergena i zagađivača, primena simptomatskih mera i biljnih preparata.

Ključne reči: kašalj, deca, prevencija

## Podrška porodici u prevenciji pušenja adolescenata

*Milošević, J.*

Preventivna pedijatrija, 2015, 1, 50-53

### Sažetak

Uvod: Pušenje predstavlja jedan od najznačajnijih faktora narušavanja zdravlja ljudi u svetu i ima brojne zdravstvene, socijalne, ekonomske i ekološke posledice. Razvojni stadijum adolescencije smatra se fazom najvećeg rizika za započinjanje pušenja. Razumevanje specifičnosti socijalnog konteksta u kome dolazi do pojave pušenja mladih, veoma je važno za kreiranje politike kontrole pušenja i programa prevencije.

Metodologija: Istraživanje je sprovedeno tokom školske 2010/2011. godine u šest osnovnih škola, sa područja grada Beograda. Uzorak je činilo 515 učenika osmog razreda, oba pola. Za prikupljanje podataka upotrebljen je Upitnik o pušenju mladih.

Rezultati: Rezultati ovog istraživanja potvrđuju da postoji povezanost između ponašanja članova porodice u vezi sa pušenjem i pušenja adolescenata: statistički značajno veća učestalost probanja cigareta ( $\chi^2 = 20,23$ ;  $df = 2$ ;  $p < 0,001$ ) i trenutnog pušenja ( $\chi^2 = 6,36$ ;  $df = 2$ ;  $p < 0,05$ ) otkrivena je kod adolescenata u čijim kućama je pušenje dozvoljeno; učestalost probanja cigareta je statistički značajno veća kod ispitanika koji žive sa nekim ko puši ( $\chi^2 = 6,65$ ;  $df = 1$ ;  $p < 0,01$ ).

Zaključak: Glavni zaključak ovog istraživanja je da porodica utiče na pojavu pušenja kod adolescenata.

## Upotreba cigareta i alkohola u populaciji učenika osnovne škole

*Milošević, J., Todorović, J.*

Preventivna pedijatrija, 2016, oktobar, 2(1-2), 50-53

### Sažetak

Uvod: U populaciji adolescenata utvrđeni su visoka prevalencija upotrebe cigareta i alkohola i trend snižavanja uzrasne granice na kojoj mladi počinju sa njihovim konzumiranjem. Razvojni stadijum adolescencije smatra se najkritičnijim periodom za eksperimentisanje i upotrebu ovih psihoaktivnih supstanci. Za kreiranje adekvatnih preventivnih programa, usmerenih na smanjenje i sprečavanje upotrebe cigareta i alkohola, neophodno je utvrditi rasprostranjenost i obrasce konzumiranja ovih supstanci kod adolescenata.

Metodologija: Realizovana su dva istraživanja, od kojih je prvo bilo usmereno na ispitivanje učestalosti upotrebe cigareta, a drugo na ispitivanje učestalosti upotrebe alkohola. Oba istraživanja su sprovedena na teritoriji grada Beograda, na uzorku učenika starijih razreda osnovne škole, oba pola.

Rezultati: Cigarete je probala jedna trećina ispitanika (32%), među kojima je svakodnevno pušenje, u trajanju od 30 dana bez prekida, zabeleženo je kod 5,2% ispitanika. Trenutno cigarete koristi 9,5% ispitanih učenika. Skoro 80% ispitanika probalo je alkohol, od kojih jedna četvrtina pije 3 i više alkoholnih pića zaredom (26,7%) i prijavila je iskustvo pijanstva (24,3%).

Zaključak: Glavni zaključak ovog istraživanja jeste da je prevalencija upotrebe cigareta i alkohola među učenicima starijih razreda osnovne škole visoka..





# IZVODI U ZBORNICIMA MEĐUNARODNIH SKUPOVA



## Allergic rhinitis among university students in belgrade

*Snezana Radic, Branislava Milenkovic, Ana Neskovic, Ljiljana Danojevic*

WISC 2016, 6.-9.2016, Jerusalem, Israel

### Abstract

**Background:** Allergic rhinitis is one of the most common chronic disease, and its prevalence has been increasing in many parts of the world in recent decades, especially in developed countries. It is an disease caused by IgE interference following contact with allergens. Allergic rhinitis may be seasonal, perennial, or episodic. It is the condition which could strongly interfere with patients well being and quality of life. There were few studies about prevalence of allergic rhinitis among university students in the world.

**Objective:** To estimate the prevalence of of allergic rhinitis, respiratory symptoms and smoking habits among population of university students in Belgrade, Serbia.

**Methods:** Questionnaire based on the European Community Respiratory Health Survey (ERCHS) protocol was used to obtain data.

**Results:** We have analysed 14 questions about respiratory symptoms in 5045 university students in Belgrade, mean age  $21.5 \pm 1.7$  years. There were 2259 (44.8%) of male and 2786 (55.2%) of female studets. The prevalence of allergic rhinitis was 20.8% (N 1048). The majority of respondents were non-smokers (73.6%), 26.4% current and 3.3% were ex smokers.

0.001). □ Allergic rhinitis was more prevalent in males (22.8% vs 19.1%,  $p$  There were 71.4% non-smoking and 28.6% smoking studets with allergic rhinitis. There were 18.0% of subjects with allergic rhinitis who use asthma medication, which was sifnificantly more than 5% who use asthma medications in general population of students.

**Conclusions:** There is a high prevalence of allergic rhinitis among university students in Belgrade, Serbia, which is in consistency with findings of other studies.

**Keywords :** allergic rhinitis, university students

## Asthma prevalence among university students in Belgrade

*Branislava Milenkovic, Snezana Radic, Snezana Ristic-stojanovic, A Milicevic, Milenkovic, Jelena Cvejic, Jelena Jankovic, Sanja Dimic-Janjic, Natasa Djurdjevic*

WISC 2016, POSTER, 6.-9.2016, Jerusalem, Israel

### Abstract

**Background:** Over the last three decades the prevalence of respiratory disease has been increasing worldwide thus increasing economic burden on the healthcare system. Recent studies have been shown that the prevalence of asthma in West European ranges from 6 to 9%, while of chronic obstructive pulmonary diseases (COPD) is 8% worldwide. Despite the large number of epidemiological studies, there are only a few studies about the prevalence of chronic respiratory diseases among students.

**Objective:** The aim of the study was to estimate the prevalence of asthma among University Students in Belgrade, Serbia.

**Methods:** We used a questionnaire based on the European Community Respiratory Health Survey (ERCHS) protocol to collect data.

**Results:** We have analysed respiratory symptoms in 5045 university students in Belgrade. There were 44.8% male and 55.2% female participants; mean age:  $21.6 \pm 1.7$  years for males and  $21.3 \pm 1.6$  years for females. There were 26.4% smokers and 3.3% ex-smokers. The most frequent symptoms were longstanding cough (15.5%) and sputum production (11.4%). Asthma attacks were reported in 2.4% of subjects and 5.0% of subjects were using asthma medications. Women reported using asthma medication more frequently than men (6.2% vs 4.3%,  $p=0.02$ ). Allergic rhinitis was reported in 71.3% participants with asthma.

**Conclusions:** There is a high prevalence of asthma among university students in Belgrade, Serbia.

**Keywords :** asthma, prevalence, students

## Uticaj vršnjaka na pojavu pušenja kod adolescenata

*Milošević, J., Todorović, J.*

U: S. Potić (Ur.), Zbornik rezimea, Dani defektologa 2016, Beograd 11-14. Februar 2016., str.

Početni motivi korišćenja duvana najčešće su radoznalost, potreba da se pripada grupi, želja za novim, izbegavanje dosade, bekstvo od problema i smanjenje socijalnih strahova (Ramah, 2001). Da li će adolescent stvoriti pušačku naviku zavisi od procesa izgradnje njegovog identiteta, rezultata socijalnog učenja, ali i pritiska koji vršnjaci vrše na njega. Rezultati brojnih istraživanja pokazuju da pušenje najboljeg druga utiče na inicijaciju pušenja adolescenta i da je druženje sa vršnjacima koji puše značajno za eskalaciju pušenja. Istraživanje je sprovedeno tokom školske 2010/2011. godine u šest osnovnih škola, sa područja grada Beograda. Uzorak je činilo 515 učenika osmog razreda, oba pola, uzrasta od 13-15 godina. Za prikupljanje podataka upotrebljen je instrument pod nazivom Upitnik o pušenju mladih (Youth Tobacco Survey (YTS) 2006 Questionnaire, Centers for Disease Control and Prevention – CDC, 2006). Podaci su prikupljeni anonimnim anketiranjem učenika na času. Za obradu podataka korišćene su metode deskriptivne statistike i hi-kvadrat test. Na osnovu rezultata dobijenih u našem istraživanju, utvrđena je statistički značajna veza pušenja sa sklonošću adolescenata da prihvate cigaretu koju im ponudi najbolji prijatelj. Statistički značajno veća učestalost odgovora da bi prihvatili cigaretu koju im ponudi prijatelj zabeležena je kod ispitanika koji su probali cigarete ( $\chi^2 = 112.95$ ;  $df = 3$ ;  $p < 0.001$ ), ispitanika koji svakodnevno puše ( $\chi^2 = 116.48$ ;  $df = 3$ ;  $p < 0.001$ ) i ispitanika koji trenutno puše ( $\chi^2 = 150.62$ ;  $df = 3$ ;  $p < 0.001$ ). Mladi pušači se češće usredsređuju na kratkotrajne pogodnosti upotrebe duvana i ignorišu štetne uticaje pa ih treba zainteresovati i motivisati kreativnim i privlačnim programima, uz korišćenje slikovnih upozorenja i uspešnih komunikacijskih veština. Edukativni sadržaji namenjeni mladima moraju biti savremeni i zasnovani na činjenicama koje se odnose, kako na pušenje kao bolest sa štetnim posledicama, tako i na pušenje kao društveno neprihvatljivo ponašanje.

## Uloga defektologa-specijalnog pedagoga u savetodavnom radu sa decom obolelom od astme i njihovim roditeljima

*Milošević, J., Todorović, J.*

Prevenција u pedijatriji - osnov za zdrav život i dugovečnost : zbornik apstrakata, Treći godišnji kongres Udruženja za preventivnu pedijatriju Srbije (UPPS) sa međunarodnim učešćem, Beograd 15-17. april 2016., str. 145

Osnovu pružanja adekvatne podrške i pomoći deci oboleloj od astme i njihovoj porodici čini dobra, sveobuhvatna procena i jasno razlikovanje nivoa zdravstvenog statusa u stalnom dinamičkom odnosu sa opštim razvojnim i ličnim potrebama u okruženju. Najnovija istraživanja pokazuju da su među decom predškolskog i školskog uzrasta najučestalije bolesti disajnih puteva (Ristić, 2015), te je neophodno u edukaciju i lečenje pacijenata uključiti zdravstvene saradnike. Kompetencije defektologa - specijalnog pedagoga u preventivnom i korektivnom radu tiču se organizovanja mera i aktivnosti u izradi programa prevencije i tretmana, sa ciljem unapređenja i očuvanja zdravlja i kontrole bolesti. Definisane potrebne uslova, postupaka i intervencija koje podsticajno deluju na razvoj deteta, uz saradnju sa roditeljima, znatno poboljšava izgleda za pravilan psihosocijalni razvoj deteta i prevenciju rizičnih faktora. Edukacija pacijenata o dijagnostičkim i terapijskim procedurama obavlja se kroz individualne i grupne oblike savetodavnog rada. Za svako dete (i porodicu) pravi se specifičan plan rane intervencije i zaštite kroz individualno savetovanje. Veštine komunikacije savetnika moraju biti izuzetno razvijene, od aktivnog slušanja, jasnog i jednostavnog izražavanja, posmatranja, umeća ohrabrivanja, podsticanja, postavljanja pitanja do veština sumiranja podataka. Primena strategija za osnaživanje celokupne porodice podrazumeva usvajanje pozitivnih stavova i ponašanja. Metode rada čine zdravstveno-vaspitanje predavanje, planirani razgovor, rad sa malom grupom, seminari i savetovanja za osnaživanje roditelja, tribine, promotivne izložbe. Multidisciplinarni pristup i timski rad u adaptaciji na novonastalu životnu situaciju su deo edukativnih protokola, a niz istraživanja i interventnih programa ukazuju na važnost holističke podrške i edukacije za optimalno funkcionisanje porodice u celini. Zajednički, kontinuirani rad u malim grupama pokazuje pozitivna reaganja dece i roditelja i interaktivnu saradnju u razmeni iskustava uz međusobnu podršku. Anketiranjem roditelja 2015. godine utvrđeno je da 98% želi organizovanje tematskih edukacija. Usklađenost i međusobna povezanost službi koje su angažovane na zaštiti dece važan su uslov za primenu kvalitetnih medicinskih usluga i uspeh zdravstveno-promotivnih aktivnosti.

## Porođaj i porođajna doba

*Prvulović Mirjana*

Knjiga sažetaka Udruženja anestetičara u Bosni i Hercegovini sa međunarodnim učešćem, 4-6. nov 2016, Sarajevo

Samo zene imaju privilegiju da radjaju, bilo bi lepo kada bi svaka mogla bar jednom u zivotu da oseti caroliju i blazenstvo porodjaja, tacnije momenat kada svoje dete prvi put privije na grudi. Radjanje postoji od momenta nastanka sveta i postojace onoliko koliko ce postojati i svet. Svako završavanje trudnoce posle 20 nedelje gestacije nazivamo porodjajem, po terminu ih delimo na:

- prevremen partus praetemporarius pre 37 nedelje gestacije,
- terminski partus a tempore od 37 do 42 nedelje gestacije i
- post terminski partus posttemporarius je porodjaj posle 42 nedelje gestacije.

Radjanje deteta odnosno izbacivanje ploda iz materice sa posteljicom, pupcanikom, ovojcima i plodovom vodom posle 20ng je porodjaj. Partus spontaneus predstavlja vaginalni porodjaj na koji nismo uticali ni medikamentima niti smo obavili neku akusersku intervencija i nazivamo ga normalnim porodjajem, partus artificialis je porodjaj na koji smo uticali medikamentozno ili nekom akuserskom intervencijom vakumom, forcepsom ili ga pak završili preko abdomena carskim rezom Sectio Cesare. Sam nacin završavanja zavisi od faktora koji uticu na porodjaj a to su

- opste stanje porodilje

Od izuzetnog nam je znacaja zdravlje majke, koje kontrolisemo jos od pocetka trudnoce, odredjena stanja i bolesti mogu da uticu na tok i nacan završavanja porodjaja.(npr Diabetes, Hipertensia i drugo) Danas uz monitoring koje poseduje porodiliste u stanju smo da pratimo sve vitalne znake u isto vreme

- porodjajne snage

Mogu biti prirodne sto su kontrakcije i retrakcije misica materice i naponi dok su vestacke snage medikamenti i pomoc akusera

- porodjajni kanal kostani i mekani deo

Kostani deo cini mala karlica dok u mekani deo spadaju materica uterus, grlic materice cervix uteri, vagina i medjica perineum.

- porodjajni objekt plod, pupcana vrpca, plodova voda, plodove opne, posteljica

Stanje, polozej, stav i smestaj ploda bitni su nam radi orijentacije u toku a takodje mogu biti presudni za odlucivanje o nacinu završavanja porodjaja, od njih zavisi mehanizam porodjaja. Pucana vrpca je obicno oko 50cm duzine ukoliko je kratka moze praviti problem u crkulaciji ploda prilikom radjanja, a ako je duza moze se obmotati oko ploda ili cak napraviti pravi cvor.

Plodova voda je okruzenje u kojoj se plod nalazi i ima je od pola do jedne litre normalno bistra do mlecaste nam ukazuje da je plod u dobroj kondiciji, a obojena ukazuje da nesto nije uredi, zelena plodova voda nam govori da plod pati a sukrvicava moze da ukaze na prevremeno odlubljanje posteljice.

Plodove opne razlikujemo dve opne horion spoljasnju i amnion unutasnju opnu koja je sa plodove strane. Deo plodove vode koja se nalazi ispred prednjaceceg dela ploda nazivamo vodenjak, plodove opne i vodenjak stite plod a pomazu i kod dilatacije i kod kontrakcija.

Posteljica se stvara krajem treceg meseca trudnoce ona je odgovorna za razmenu materija izmedju majke i ploda stiti plod od infekcije i proizvodi hormone neophodne za odrzavanje trudnoce.Znaci ima nutritivnu respiratornu i ekskretornu funkciju. U terminu je najcesce oblika pogace tezine oko pola kilograma sastavljena od 16-20 reznjeva (kotiledona) tamno crvene boje

ta strana je okrenuta materici i naziva se pars materna, deo koji je okrenut plodu je gladak i sjajan, cini ga amnion sa njega polazi pupčanik i zove se pars foetalis. Kod porodjaja nam je bitno kako i kom segmentu je posteljica usadjena zatim njena zrelost odnosno mogucnost da svoju funkciju izvrši do kraja.

Tok porodjaja delimo po porodjanim dobima ima ih cetri:

-I porodjano doba je doba sirenja, dilatacije to je deo porodjaja koje najduze traje (kod prvoročke može trajati i do 12h pa i 16h) Pčinje prvim ritmicnim kontrakcijama materice i traje do potpunog nestanka(zbrisanja i otvaranja) grlica materice tacnije potpune dilatacije. Grlic se skracuje od donjeg ka gornjem segmentu i kod prvoročke prati dilataciju tako da je obicno zbrisan na oko 4cm dilatacije, kada se akuser obicno odlucuje da otvara vodenjak, trudnica dobija epiduralnu anesteziju te u prilicnoj meri mozemo skratiti vreme porodjaja. Kod zena koje su vec radjale kod viserotki skracivanje grlica ne prati dilataciju, cesto imamo slucaj da na dilataciji od 6-7cm grlic jos uvek ima duzinu i do 1cm no kod njih nam on ne predstavlja problem jer se zbrise do potpune dilatacije. Kada se dilatacija grlica završi 10cm prelazimo u II porodjano doba.

-II porodjano doba pčinje sa pojavom napona i potpunom dilatacijom i završava rođjenjem deteta ovaj period phasis expulsionis traje kod prvoročke maksimum do dva sata a kod vise ročke do jednog sata. Pod dejstvom matericnih kontrakcija a sad vec i napona prednjaceci deo se spustio i završava svoju unutarnju rotaciju, zatim se radja prednjaceci deo, spoljna rotacija nakon sto nam je novorođence izašlo u spoljnu sredinu odvaja se od majke i obavlja prva nega novorođenceta. Ovde se mogu javiti nepravilnosti usled nesrazmere karlice i prednjaceceg dela, bilo da govorimo o velikoj karlici i manjem prednjacem delu defleksiji ili o maloj karlici i vecem prednjacecem delu diproporciji akuser procenjuje i donosi odluku o daljem nacinu završavanja porodjaja. O mehanizmu porodjaja ce kasnije biti reci.

-III porodjano doba je doba izbacivanja ili radjanja posteljice i ne traje duze od pola sata. Posteljica se u tom vremenu obicno odlubi sama bez nase intervencije istiskujemo je



Kredeovim postupkom, pregleda se da li je cela kog je oblika gde je usadjen pupčanik i koliki je time se završava i ovo doba.

-IV porodjano doba je vreme kada se posle izbacivanje posteljice misici materice skpljaju retrahuju i stezu kontrahuju te krvarenje prestaje zbrinu se povrede i epiziotomija a zatim porodilja prati jos dva sata nakon rođjenja deteta, ako je sve proteklo bez osobenosti porodilja može da predje na odeljenje i pčinje doba babinjare.

Spontani fizioloski porodjaj ili eutocija je porodjaj gde su sva porodjana doba i mehanizam porodjaja protekli bez ikakavih intevencija.

Mehanizam porodjaja zavisi od porodjajnog objekta i karlice majke. Odredjuje ga plod u zavisnosti od svog polozaia smestaja stava i drzanja a karlica svojim oblikom.

Polozaia ploda situs podrazumeva odnos uzduzne osovine ploda i majke:

-uzduzni ili situs longitudinalis kada se ne seku a paralelne su

Uzduzni polozaia može da bude tako sto plod prednjaci glavicom sto je i najcesci polozaia ploda i najpovoljniji i karlicom.

-kos ili situs transversus

Polozaia u kome plod lezi koso u odnosu na uzduznu osovinu majke, nepovoljniji je od uzduznog polozaia ali je moguće da se plod spontano ili putem okretanja majke na odgovarajuci bok dovede u povoljniji polozaia te da se porodjaj završi vaginalnim putem

-poprecan kada se seku pod pravim uglom odnosno situs obliquus

Nepovoljan polozaia ploda za završavanje porodjaja vaginalnim putem te se u ovom slucaju akuser odlucuje za operativni put tj carski rez Sectio Cesare



Smestaj ploda positio određuje odnos ledja ploda i trbusni zid majke, prvi smestaj positio sinistra je kada su ledja ploda smestena sa leve strane majke i naravno drugi smestaj positio dextra kada su ledja ploda desno. U oba smestaja je moguće da ledja budu više okrenuta ka ledjima majke u tom slučaju pričamo o dorsoposteriornom drugom smestaju ili dorsoanteriornom prvom ledja su okrenuta više ka prednjem trbusnom zidu majke. Kod kosog i porednog položaja smestaj se gleda po mestu gde se nalazi glavica ploda.

Drzanje ploda habitus je međusobni odnos pojedinih delova

ploda. Drzanje direktno zavisi od oblika i prostranosti same materice. Kako je materica jajastog oblika tako je i plod prinudjen da zauzme fleksiono skupljeno drzanje, lako savijen u kicmi skupljenih i preklopljenih udova te savijene glavice put grudnog kosa i udova.

Kad nam je prednjaceci deo glavica i drzanje je kupljeno fleksiono prednjaci potiljak ploda sto je najcesce i najpovoljnije za ishod porodjaja.

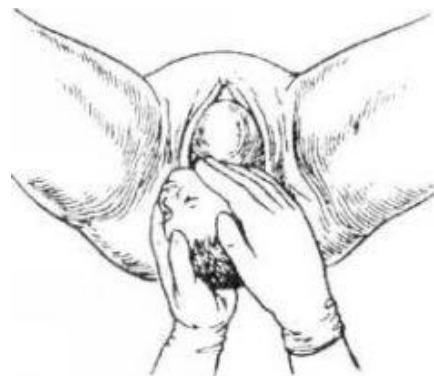
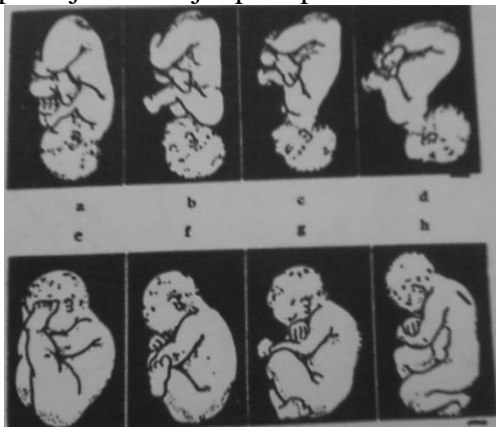
Stav ploda presentatio određuje deo koji se nalazi nad karlicnim ulazom odnosno deo koji prednjaci te se po njemu određuje tacka vodilja.

-Potiljacni stav je kada položaj ploda uzduzan smestaja I ili II u potpuno fleksionom drzanju

-Temeni stav prvi stupanj defleksionog drzanja ploda tada nam je tacka vodilja teme ploda prilikom unutarnjeg pregleda pipamo suturu sagitalis i malu i veliku fontanelu

-Ceoni stav je drugi stupanj defleksije tacka vodilje celo ovaj stav nam je nepovoljan za završavanje porodjaja vaginalnim putem jer plod ide svojim najvećim obimom kroz karlicu te se završava operativnim putem, pri ginekoloskom pregledu nailazimo na ceonu kost

-Licni stav je treci stepen defleksije kada plod sa vojim licem prednjaci tacka vodilja nam je lice vrlo se lako postavlja diagnoza prilikom unutarnjeg pregleda se pipaju nos i usta, prilicno nepovoljan nalaz jer plod prolazi vecim obimima nego kod potiljacnog stava.



Kod karlicnog uzduznog položaja razlikujemo takodje potpunu fleksiju potpuni karlicni kada nam je tacka vodilja karlica ploda, zatim nepotpuni karlicni kada su noge ploda opruzene uz telo ploda, stav nozicama kada nam je tacka vodilja jedna od nogica ploda i na kraju koleno stav kada nam prednjaci koleno ploda.

U slučaju kosog i popreznog položaja mozemo govoriti o ramenom stavu ako se korekcija položaja ne uradi na vreme i kao sto smo rekli oni su nepovoljni za vaginalno završavanje položaja.

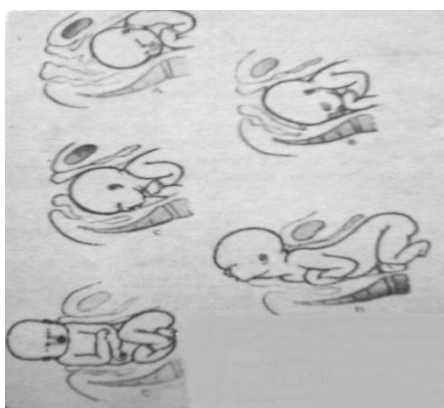
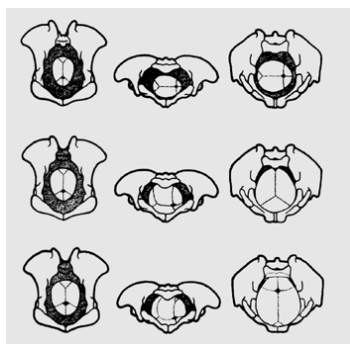
Mehanizam porodjaja predstavlja sve radnje koje plod vrši prilikom prolaska i izlaska iz porodjanog kanala, dobro poznavanje mehanizma nam omogućava da u svakom momentu mozemo znati kako porodjaj napreduje i da li mozemo očekivati neki zastoj.



Potiljacni stav presentatio occipitalis postoji kao sto smo rekli prednji i zadni, tacka po kojoj se orijentisemo je sutura sagitalis i kod prednjeg mala fontanela a kod zadnjeg velika fontanela, mehanizam porodjaja ima svoje faze

- naleze na karlicu i vrsi prvu fleksiju kako bi se prilagodio kostanom delu glavica jos uvek moze da se odgurne prilikom pregleda
- unutrasnja rotacija sutura sagitalis se sad nalazi koso
- dovrsava unutrašnju rotaciju sutura sagitalis je uspravna( kod prednjeg mala fontanela je na 12h a kod zadnjeg na 12h je velika)
- prilikom izlaska vrsi defleksiju i radja se potiljak lice i brada lice gleda na dole
- spoljasnja rotacija glavice licem okrece na onu stranu na koju je bila okrenuta i u materici dok se ramena unutar porodjajnog kanala rotiraju na stranu na kojoj su bila ledja zatim se radja gornje rame donje telo i noge ploda

Prednji potiljacni mehanizam porodjaja je najpovoljniji i najcesci dok je zadnji potiljacni nesto redji i obicno sporiji prva i treca faza su iste kod oba dok se druga i cetvrta



razlikuju. U drugoj fazi dovršava rotaciju tako sto velika fontanela staje na 12h sto znaci da licem gleda u prednji zid trbuha majke vrsi defleksiju radja se potiljak sa licem na gore zapocinje rotacija ramena te se lice okrece na stranu na koju je gledalo i u materici.

Uloga babice u porodjaju:

Psihicka

Babica prima trudnicu i sa empatijom objasnjava svaki segment pripreme i porodjaja koji trenutno prolazi.

Fizicka

Daje klizmu, uzima karlične mere smesta trudnicu na porodjajni krevet zatim pomaže joj da zauzme dobar položaj za porodjaju,

Prati tonove ploda(ctg)

Prati dilataciju, vrši unutrašnji akušerski pregled

Daje prepisanu terapiju od strane akušera

Priprema materijal i instrumente za porodjaj

Aktivno učestvuje u prodjaju trudnice

Zbrinjava porodilju

Prati vitalne znake

Prevodi porodilju na odeljenje

Savremeno akuserstvo je u mnogome olaksalo porodjaj i trudnici odnosno porodilji i akuserskom timu, uz znanje mehanizma porodjaja koji sam vam u najkracim crtama opisala uz periduralnu anesteziju, aparaturu, medikamente i psihofizicku pripremu cine da je danas porodjaj skoro bezbolan te je porodilja u mogucnosti da uziva u najlepšem danu svog zivota.

## Allergen Specific Immunotherapy: Effect on Immunological Markers and Clinical Outcomes in Asthmatic Children - A Real Life Clinical Trail

*Filipovic I, Zivkovic Z, Filipovic Dj*

Izvod u zborniku radova WAO INTERNATIONAL SCIENTIFIC CONFERENCE 2016

**Background:** Allergen-specific immunotherapy (AIT) holds a great promise in the management of allergic conditions, as the only with the capability to change the natural causes of allergic diseases. Most studies evaluated clinical scores as the main parameters, whereas immunological and-or inflammatory factors were studied only occasionally. The aim of this study was to investigate the efficacy of SLIT on FeNO, as well as to compare the relationship to asthma symptom and medication score and parameters of lung function.

**Methods:** 59 asthmatic children were included in the study. 34 patients were received sublingual allergen specific immunotherapy (SLIT) plus standard pharmacotherapy while 29 children received only standard pharmacotherapy according to the GINA guideline. Efficacy was evaluated using FeNO, asthma and medication symptom score and lung function tests. The results of the test were compared at baseline, during the first year of follow up period and at the end of the observational period.

**Results:** FeNO values decreased significantly in SLIT group ( $X^2=52,220$ ;  $p<0,001$ ) compared to baseline during the first and the second year of follow up period, whereas control group values remained similar. The SLIT group experienced significant improvement in asthma symptoms and medication score, whereas the control group did not. Lung function tests were also changed significantly but only in the SLIT group.

**Conclusions:** SLIT improves biological and clinical parameters in asthmatic children during the first year of follow up period with a sustainable improvement during the second year. This is one of the first studies found positive correlation between subjective parameters such as asthma and medication score and objective parameter FeNO and lung function.

**Key words:** Allergen specific immunotherapy, Asthma, Childhood, exhaled NO

## A case report of high risk atopic children with positive family history of anaphylactic reaction to buckwheat

*Filipovic I, Zivkovic Z,*

Izvod u zborniku radova Food Allergy and Asthma Meeting 2016

**Background:** Buckwheat, which has been abundantly consumed in Asian countries and has been increasingly popular in the United States, Canada, and Europe, can be a potent allergen when ingested or inhaled. Common buckwheat (*Fagopyrum esculentum*) is known to cause severe anaphylactic reactions in adult individuals. However, type I allergy to buckwheat is rarely seen in children.

**Report:** Our case is reported a 45-year-old man developed life-threatening anaphylaxis after eating food containing buckwheat on 3 different occasions. He had tolerated all kinds of wheat for many years. Few minutes after eating buckwheat home-baked bread experienced urticaria, dyspnoea, wheezing, as well as symptoms of gastrointestinal tract nausea and vomiting. After circulatory collapse he admitted to the ER requiring restitution. It is interesting to mention that the third case of anaphylaxis was after intake of buckwheat flour as the hidden allergen in pastry. Prior to the first episode of anaphylaxis he has a positive history of respiratory allergies (asthma and allergic rhinitis) as well as positivity to multiple inhalator allergens (mixture of different grass pollen, ragweed, and tree pollens). Skin testing by the prick technique revealed positive reaction to buckwheat with negative reactions to other foods including wheat, egg white, and milk. A prick-to-prick test with buckwheat flour was also positive. His daughter suffered from the respiratory allergies (asthma and allergic rhinitis), atopic dermatitis since birth and complains of mouth itching while consuming hazelnut and walnuts. Her in vitro tests were positive to alpha lactalbumine, casein, peanuts, acarus, dogs' and cats' hairs, horse's and cow's epithelium as well as to the rodent epithelium, mixed grass pollens, tree pollens (birch, beech, ragweed. Total serum IgE were extremely high 1065.

**Clinical relevance of report:** According to the literature 11s globulins in buckwheat have the potential to induce IgE antibodies cross-reactive with 11S globulins in other, botanically unrelated foods and may induce anaphylactic reactions. In developing countries sophisticated diagnostic methods are not available, so we need to make a detail plan for preventing anaphylactic reaction in children with positive family history of anaphylactic reaction to food allergens without severe restrictive diet.



# IZVODI U ZBORNIKU NACIONALNOG SKUPA



## Astma i adolescenti

*Đurić-Filipović I, Caminati M, Filipović Đ, Živković Z*

Zbornik apstrakata Treći godišnji kongres Udruženja za preventivnu pedijatriju Srbije (UPPS) sa međunarodnim učešćem "PREVENCIJA U PEDIJATRIJI – OSNOV ZA ZDRAV ŽIVOT I DUGOVEČNOST"

### Sažetak

Dete je primljeno u Bolnicu za dečije plućne bolesti i TBC zbog pogoršanja zdravstvenog stanja, Uvod: Sa globalnom prevalencom od 6,9% astma predstavlja jedno od najčešćih hroničnih oboljenja u adolescenciji. Zahvaljujući jedinstvenim psihofizičkim promena izuzetno je važno pravilno i na vreme prevenirati i lečiti astmu kod adolescenata

Cilj rada: Cilj ovog rada je da utvrdi znanja, stavove i ponašanja adolescenata po pitanju astme i terapije astme.

Materijal i metode: U studiji je učestvovalo 30 adolescenata prosečne starosti 15 godina. U ovom istraživanju korišćen je upitnik otvoreno-zatvorenog tipa koji je sadržao 14 pitanja koja ispituju adherenciju (uz pomoć MARS- Medicine Adherence Report Scale, na skali od 0-5) znanja, stavove i ponašanja adolescenata prema astmi i terapiji astme.

Rezultati: Faktori koji imaju najviše uticaja na zdravlje adolescenata sa astmom su pušenje, izlaganje spoljašnjim i unutrašnjim alergenima i stres. Najveći broj pacijenta poštuje savete lekara 27/30 nikada ne preskače doze, 15/30 pacijenta sa druge strane ponekad ili čak uvek menja preporučenu dozu lekova, a 18/30 pacijenata uzima redovnu terapiju samo po potrebi. Najveći broj pacijenta veruje da su lekovi neophodni za kontrolu astme (26/30 pacijenta). Sa druge strane znajnje o terapiji astme je na veoma niskom nivou (18/30 ne zna da inhalatoni kortikosteroidi (ICS) dovode do dilatacije disajnih puteva, a isti broj pacijenata ne zna koliko traje dejstvo ICS, sa druge strane preko 80% pacijenta zna da ICS ne dovode do povećanje telesne težine i fizičke zavisnosti). Smart telefoni sa aplikacijama za podsećanje po mišljenju ispitanika predstavljaju najbolji način za povećanje adherencije.

Zaključak: Poseban fenotip astme kod adolescenata zahteva poseban pristup. Strategija za lečenje uvek mora da podrazumeva perspektivu adolsecenta. Pametni telefoni predstavljaju obećavajuće sredstvo za poboljšanje adherencije.

Ključne reči :astma, adolescenti, adherencija

## Respiratorna i nutritivna alergija – mogućnosti prevencije

Živković Z

Zbornik apstrakata: Treći godišnji kongres Udruženja za preventivnu pedijatriju Srbije (UPPS) sa međunarodnim učešćem “PREVENCIJA U PEDIJATRIJI – OSNOV ZA ZDRAV ŽIVOT I DUGOVEČNOST”

### Sažetak

Respiratorna i nutritivna alergija su dva klinička entiteta često udružena, čija se prevalencija povećava poslednjih godina. Literaturni podaci ukazuju na prisustvo respiratornih simptoma kod dece sa verifikovanom nutritivnom alergijom, ali što je još važnije, alergija na određenu hranu povezuje se sa pojavom akutnih i teških pogoršanja alergijske kijavice i astme.

**Cilj rada:** Cilj ovog rada je utvrditi epidemiološku i kliničku povezanost između respiratorne i nutritivne alergije, a zatim istaći i najnovije preporuke o dijetetskom režimu tokom trudnoće i perioda dojenja, vreme uvođenja solidne hrane sa ciljem smanjenja rizika od razvoja posledične respiratorne alergije.

**Materijal i metode:** Pretraživanje literaturnih podataka je izvršeno putem baze PubMed, upotrebom ključnih reči: nutritivna alergija, alergijski rhinitis, astma, respiratorna alergija, dojenje, mešovita ishrana, prevencija.

**Rezultati:** Udruženost respiratorne i nutritivne alergije je intenzivnija kada je hipersenzitivnost na određenu hranu prisutna od ranog detinjstva i perzistentna.

Nutritivna alergija obično prethodi respiratornoj alergiji i može biti faktor rizika za rano ispoljavanje alergijske kijavice i/ili astme, i relevantan klinički marker za tešku atopijsku astmu. Takođe, koegzistirajuća astma može imati i životno ugrožavajuće simptome u slučaju akutne alergijske reakcije na određenu hranu. Preporuke za dijetetske restrikcije tokom trudnoće i perioda dojenja sa ciljem prevencije razvoja respiratorne alergije kod deteta, su kontroverzne, i prate ih nedosledni rezultati istraživanja i kliničkih analiza.

Trenutne preporuke su ekskluzivno dojenje tokom prvih četiri meseca života, a uvođenje solidne hrane od četvrtog do sedmog meseca života. Uvođenje mešovite ishrane tek krajem prve godine života, može povećati rizik za pojavu alergijskih reakcija. U literaturi se često susrećemo sa pretpostavkama da hipoalergijska ishrana majke smanjuje rizik za pojavu alergije kod deteta, ali se u većem broju naučnih radova, pokazalo da takva intervencija ne koristi u praksi prevenciji razvoja alergijskih bolesti.

**Zaključak:** Mere restrikcije u ishrani usmerene su samo na najozbiljnije forme nutritivne alergije, sa ciljem smanjenja aktuelnih simptoma, ali i sa ciljem prevencije razvoja respiratorne alergije.

**Ključne reči:** nutritivna alergija, deca, respiratorna alergija

## Uticaj alergen specifične imunoterapije na FeNO kod dece sa astmom

*Đurić-Filipović I, Zivković Z*

Zbornik apstrakata 47. Pedijatrijskih dana Srbije

### Sažetak

Uvod: Alergen specifična imunoterapija (AIT) još uvek predstavlja jedinu terapiju sa mogućnošću izmene prirodnog toka alergijskih bolesti kao i prevencije nastanka novih senzibilizacija. Najveći broj studija proučava kliničke skorove kao glavne parameter efikasnosti imunoterapije, dok je mali broj studija koje mere imunološke I inflamatorne faktore.

Cilj: Cilj naše studije je bilo merenje koncentracije FeNO u izdahnutom vazduhu, kao parametra inflamacije donjih disajnih puteva, tokom primene imunoterapije

Materijal i metodi rada: 59 dece je bilo uključeno u studiju. 34 pacijenta je primalo sublingvalnu alergen specifičnu imunoterapiju i standardnu farmakoterapiju, dok je 29 dece bio samo na standardnoj farmakoterapiji prema GINA protokolima. Kliničku efikasnost SLIT smo procenjivali na osnovu astma I rhinitis skora, kao I pomoću objektivnih parametara kao što je FeNO i merenjem plućne funkcije. Rezultati merenja su poređeni u tri vremena: na početku studije, tokom prve godine lečenja i nakon dve godine. Rezultati: Rezultati studije su pokazali značajan pad vrednosti FeNO tokom praćenja u grupi pacijenata na SLIT ( $X^2=52,220$ ;  $p<0,001$ ). Sa druge strane nije došlo do značajne promene u vrednostima ovog parametra kod grupe pacijenata samo na standardnoj farmakoterapiji. Ovi rezultati su u korelaciji sa rezultatima simtpom i lek skora.

Zaključak: SLIT ima povoljan efekat na biološke I kliničke parameter kod dece sa astmom koji se beleže već tokom prve godine praćenja, sa značajnim daljim poboljšanjem tokom druge godine primene terapije. Ovo je jedna od prvih studija koja je pokazala I pozitivnu korelaciju između subjektivnih parametara kao što su astma i lek skor I objektivnog parametra FeNO.

## Ispitivanje zadovoljstva dobrovoljnih davalaca krvi Službe za transfuziologiju KBC "Dr Dragiša Mišović-Dedinje"

*Stojković S, Mihić-Tomić B, Ilinčić Lj.*

Zbornik Rezimea XII Kongres anesteziologa, reanimatora, transfuzista Srbije, Vrnjačka Banja, 13-17. 4. 2016, 92-93 str.

### Sažetak

**Uvod:** U ostvarivanju zadataka Službe za transfuziju za kontinuiranim prilivom optimalnih količina krvi, a u cilju blagovremenog i efikasnog zbrinjavanja pacijenata, neophodno je preduzimati odgovarajuće mere i aktivnosti, delujući na podsticanje svesti građana da redovno daju krv. Zadovoljstvo pruženom uslugom i pozitivni utisci predstavljaju dobar put u procesu omasovljenja dobrovoljnog davalatstva krvi.

**Cilj:** Utvrđivanje stepena zadovoljstva dobrovoljnih davalaca, kao i faktora koji utiču na njihovo zadovoljstvo.

**Metodologija:** Tokom 2015. godine u Službi za transfuziologiju KBC „Dr Dragiša Mišović-Dedinje“ prvi put je sprovedena anketa za procenu zadovoljstva dobrovoljnih davalaca krvi. Anonimni upitnik je deljen tokom jednog radnog meseca, u sali i u mobilnim timovima na terenu, nakon obavljenog davanja krvi. Upitnik je sadržao pitanja vezana za opšte podatke o davaocima krvi, kao i pitanja koja su se odnosila na ocenu zadovoljstava pojedinim segmentima procesa prikupljanja krvi.

**Rezultati:** Odziv učesnika u anketi je bio izuzetno visok (99%). Analizom podataka ankete utvrđeno je da je od ukupnog broja anketiranih (209) najveći broj višestrukih davalaca (46%) što je očekivano s obzirom da je većina akcija sprovedena u srednjim školama, među učenicima koji su prethodno već dali krv. Najveći broj davalaca je bio muškog pola (62%), starosne dobi 18-20 godina (48%), po zanimanju učenici (49%). Sve ispitivane segmente procesa rada najveći procenat anketiranih davalaca je ocenio najpovoljnijom ocenom. Prijem davalaca krvi ocenjen je kao ljubazan u 99,5%, dužina čekanja na davanje ocenjena je kao kratka u 70%, pitanja iz upitnika ocenjena su kao razumljiva u 99%, lekarski pregled ocenjen je kao očekivan u 88%, ubod igle u venu ocenjen je kao gotovo bezbolan u 85%, a osoblje je tokom i po završenom davanju krvi ocenjeno kao ljubazno u 95%.

Opšte zadovoljstvo pruženom uslugom je ocenjeno najvišom ocenom (5) u 68%, a čak 88% anketiranih davalaca krvi je procenilo da će sigurno ponovo dati krv.

**Zaključak:** Rezultati ankete su pokazali da su DDK bili izuzetno zadovoljni kvalitetom rada celokupnog osoblja u procesu prikupljanja krvi. Svi segmenti rada su ocenjeni najvišim ocenama, a posebno ohrabruje podatak da je čak 88% anketiranih odgovorilo da će ponovo darivati krv. Analiza istraživanja predstavlja osnovu za planiranje aktivnosti za dalje unapredjenje kvaliteta rada, jer stepen zadovoljstva utiče na zadržavanje višestrukih davalaca, kao i povećanje broja redovnih, a time i ukupnog broja DDK.



## Savremena organizacija rada u Službi za transfuziologiju

*Vujić P, Stojković S, Seničić V.*

Zbornik Rezimea XII Kongres anesteziologa, reanimatora, transfuzista Srbije Vrnjačka Banja, 13-17. 4. 2016, 94-95 str.

### Sažetak

**UVOD :** Savremena organizacija rada službe za transfuziologiju obuhvata definisanje, propisivanje, sprovođenje, beleženje, preispitivanje radnih procesa, kao i preduzimanje mera za stalno poboljšanje kvaliteta rada. To podrazumeva primenu identičnih procedura i postupaka u svakodnevnom radu, a u cilju obezbeđivanja standardizacije rada i minimiziranja nastanka greške, čime se smanjuje potencijalni rizik za davaoce krvi, pacijente i zaposlene.

**CILJ :** Prikaz unapređenja organizacije procesa rada službe uvođenjem pisanih procedura za postupak prikupljanja krvi, procesiranja, skladištenja, ispitivanja i kontrole krvi davalaca, pretransfuzionim imunohematološkim ispitivanjima, distribuciji krvi i krvnih komponenti i obezbeđenje kvaliteta, kako bi se na jedinstven i kontrolisan način odvijali svi navedeni segmenti rada.

**MATERIJAL I METODE :** KBC je akreditovan 2011. godine a reakreditovan 2015g. po Standardu za akreditaciju zdravstvenih ustanova sekundarne i tercijarne zdravstvene zaštite. U sklopu akreditacije uvedeno je 465 procedura, od kojih se 15 zajedničkih koristi u Službi za transfuziologiju. Napisane su i procedure vezane za najvažnije segmente rada u Službi.

**REZULTATI:** Sve procedure koje se primenjuju u KBC-u unete su u centralni akreditacioni registar i označene su sa CAR-P- broj-A;B;C. Procedure su odobrene od Stručnog saveta KBC-a i Direktora ustanove. U centralni akreditacioni registar upisani su i svi protokoli koji su u upotrebi u Ustanovi (CAR-PR-broj) kao i radne sveske (CAR-RS-broj). Od 33 upisana protokola u centralnom registru 21 se koristi isključivo u Službi za transfuziologiju a 2 su zajednička, a od 90 radnih sveski, 18 se koristi u Službi. Proces rada u Službi za transfuziologiju se odvija uz korišćenjem 15 zajedničkih procedura (Procedura odlaganja nesterilnih igala, medicinskog otpada, transporta medicinskog otpada i druge), kao i četiri procedure koje se odnose samo na rad Službe za transfuziologiju. Procedure se odnose na: Prikupljanje krvi od davalaca na terenu i u Službi, Ispitivanje i kontrola krvi davalaca, Pretransfuzionu imunohematološka ispitivanja. Služba redovno sprovodi kontrolu kvaliteta pripremljenih komponenta krvi prema smernicama dobre prakse i preporukama Vodiča za pripremu, upotrebu i obezbeđenje kvaliteta krvi i komponenta krvi Saveta Evrope. Osim toga u Službi se na mesečnom nivou, (prema Pravilniku o pokazateljima kvaliteta zdravstvene zaštite, Sl. glasnik RS, br 49/2010. I Metodološkom uputstvu za postupak izveštavanja zdravstvenih ustanova o obaveznim pokazateljima kvaliteta zdravstvene zaštite, Institut za javno zdravlje Republike Srbije, „Dr Milan Jovanović Batut“ 2007., 2011). prate pokazatelji kvaliteta rada o čemu se formiraju izveštaji i šalju Komisiji za unapređenje kvaliteta KBC.

**ZAKLJUČAK :** Uvođenje i primena sistema kvaliteta doprinosi ostvarenju osnovne uloge koje transfuziologija ima, a to je obezbeđenje kvaliteta usluga i produkata krvi, i zadovoljenje potreba bolesnika, da pod jednakim uslovima dobiju uvek odgovarajuću bezbednu krv.



## POGLAVLJE U UDŽBENIKU



# Kompjuterizovana tomografija abdomena i karlice

urednica: Sanja Stojanović

## Poglavlje 9: Peritonealni prostor

autori: Dr Gordana Lukić, Dr Sava Stajić



### REČ UREDNICE

Od trenutka uvođenja u kliničku praksu do danas, kompjuterizovana tomografija je moćan dijagnostički modalitet, čije se tehničke karakteristike, a samim tim i dijagnostičke mogućnosti ubrzano razvijaju, tesno vezane sa modernom tehnologijom. Na zahteve lekara odgovoreno je razvojem visokospecifičnih programa i softverskih paketa za izučavanje tankog i debelog creva, krvnih sudova i pluća. Pred radiologe se postavlja dvostruki zadatak: da dobro poznaju anatomiju i patologiju regija koje pregledaju, ali i da su upoznati sa svim mogućnostima aparata, kako bi izabrali pravi put da što brže i sa što manje zračenja dođu i do dijagnoze. Kompjuterska nauka se u savremenom svetu, izuzetno dobro razvija, a sa njom i mogućnosti u radiologiji. Kliničari svih specijalnosti sve više zavise od naših nalaza da bi postavili dijagnozu, pratili efekat terapije, preoperativne,

postoperativne i postradijacione komplikacije i slično. Ja volim da kažem da radiologija nije i ne može sve, ali moderna medicina bez radiologije skoro da ne može ništa. U Novom Sadu se već 13 godina održava edukativni kurs iz kompjuterizovane tomografije (CT-a) sa ciljem da u kratkom vremenskom periodu stručnjaci iz celog regiona i Evrope, prikažu što veći broj različitih slučajeva, nove protokole pregleda i ukažu na tehnološke novine za aparaturu.

U ovoj knjizi su koncizno i slikovito prikazana patološka stanja abdomena i karlice sa kojima se često srećemo, kao i zamke koje nas mogu odvesti ka pogrešnoj dijagnozi.

Nadam se da će Vam ova knjiga postati veran prijatelj i pomoćnik u svakodnevnom radu, ali ne zaboravite da je radiologija medicinska umetnost u kojoj Vi i od sitnih sivih tačkica piksela i voksela sastavljate priču, donosite odluke, usmeravate ljudske sudbine i pomažete pacijentima.

Stalno širite svoja znanja i postaćete veliki radiološki umetnik čija neprocenjiva dela će biti sačuvani ljudski životi.

Na kraju želim da se zahvalim svim zapolsenima u Centru za radiologiju, lekarima, tehničarima, nemedicinskim radnicima i volonterima čiji je rad satkan u listove ove knjige. Veliko hvala i recenzentima, Prof. Tatjani Stošić Opinčal i Prof. Dušanu Hadnađevu, na tome što su svojim stručnim savetima i konstruktivnim kritikama pomogli u izradi ove knjige. Nadam se da će Vam ova knjiga biti veran i pouzdan pomoćnik u svakodnevnom radu.

