

## DOMAĆI AUTORI U MEĐUNARODNIM PUBLIKACIJAMA U 2007. GODINI

### DOMESTIC AUTHORS IN INTERNATIONAL PUBLICATIONS IN 2007

#### CURRENT CONTENTS

1. **Tahirovic H, Toromanovic A, Bacaj D, Hasanovic E. Ketoacidosis at onset of type 1 diabetes mellitus in children in Bosnia and Herzegovina: frequency and clinical presentation. J Pediatr Endocrinol Metab. 2007; 20(10): 1137-40.**

Department of Pediatrics, University Clinical Center Tuzla, Bosnia and Herzegovina. [husref.tahirovic@untz.ba](mailto:husref.tahirovic@untz.ba)

2. **Pranjić N, Brković A, Beganlić A. Discontent with financial situation, self-rated health, and well-being of adolescents in Bosnia and Herzegovina: cross-sectional study in Tuzla Canton. Croat Med J. 2007; 48(5): 691-700.**

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**AIM:** To examine the relationship between quality of life, self-rated health, and well-being and to establish the relationship between discontent with familial financial situation and health in adolescents living in the Tuzla Canton. **METHOD:** The study comprised a random sample of 356 high school students aged 16, coming from 15 different classes of 16 high schools in the Tuzla municipality. Data were obtained using a validated self-reporting questionnaire on demographic and socioeconomic background, structure, and dynamics of the adolescent's family, life-style, perception, and satisfaction with the financial situation and current health status, as well as social relationships and health care provided in school settings. **RESULTS:** In 11% (n=40) of students' households several poverty indicators were present. Twenty three percent (n=82) of the examinees were dissatisfied with the financial situation in their families, and 73% of them came from local, non-refugee families. They presented with progressive symptoms of unhappiness and expressed discontent with their health condition, and even self-hate in comparison with adolescents who were satisfied with the financial situation in their families ( $\chi^2=21.5$ ;  $P=0.001$ ). The prevalence of self-rated mental symptoms was significantly lower among adolescents who were satisfied with their financial situation than in those who were dissatisfied (symptoms of depression 57/274 vs

40/82,  $P=0.001$ ; sadness 73/274 vs 45/82,  $P=0.001$ ; moroseness 34/274 vs 19/82,  $P=0.001$ ; under-education 29/274 vs 18/82,  $P=0.001$ ; bad marks and school failures 31/274 vs 20/82,  $P=0.001$ ; suicidal attempts 11/274 vs 7/82,  $P=0.001$ , respectively). Using linear regression analysis we found that adolescents' satisfaction with the financial situation was a major factor predicting depression (OR, 1.57; 95% CI, 1.158-1.855), loss of appetite (OR, 0.82; 95% CI, 0.561-1.235), distraction (OR, 1.19; 95% CI, 0.837-1.154), unhappiness (OR, 1.05; 95% CI, 0.686-1.405), and inability to perform at school as expected (OR, 1.24; 95% CI, 0.903-1.581). **CONCLUSION:** Discontent with the financial situation significantly reduces the quality of mental health, leads to inappropriate patterns of behavior, and endangers future perspectives and well-being of adolescents.

3. **Zerem E, Hadzic A. Sonographically guided percutaneous catheter drainage versus needle aspiration in the management of pyogenic liver abscess. AJR Am J Roentgenol. 2007; 189(3):W138-42.**

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**OBJECTIVE:** The purpose of this study was to determine the effectiveness of percutaneous catheter drainage (PCD) and to compare PCD with percutaneous needle aspiration in the management of liver abscess. **SUBJECTS AND METHODS:** Sixty patients with pyogenic liver abscess were randomly assigned to two groups in a prospective study. Antibiotics were administered for 10 days, starting the day of the beginning of percutaneous treatment. One group was treated with sonographically guided PCD and the other group with repeated percutaneous needle aspiration. Percutaneous needle aspiration was attempted a maximum of three times. Lack of response to the third aspiration was considered failure of treatment; these patients were treated with PCD but were not included in the PCD group for analysis. Patient demographics, duration of hospital stay, treatment outcome, and complications were

analyzed. RESULTS: Percutaneous needle aspiration was successful in 20 (67%) of the 30 patients after one (n = 12), two (n = 7), or three (n = 1) aspirations. PCD was curative in all 30 patients after one (n = 24) or two (n = 6) procedures. All abscesses 50 mm or less in longest diameter were successfully managed, 10 by percutaneous needle aspiration and 12 by PCD. None of patients in the percutaneous needle aspiration group with multiloculated abscesses (n = 5) was successfully treated. Hospital stay did not differ significantly between the groups. There were no complications related to the procedure. CONCLUSION: PCD is more effective than percutaneous needle aspiration in the management of liver abscess. Percutaneous needle aspiration can be used as a valid alternative for simple abscesses 50 mm in diameter or smaller.

**4. Brkić F, Umihanić S. Tracheobronchial foreign bodies in children. Experience at ORL clinic Tuzla, 1954-2004. Int J Pediatr Otorhinolaryngol. 2007; 71(6): 909-15.**

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OBJECTIVE: To determine the clinical characteristics and the results of bronchoscopic treatment of children due to foreign body aspiration in a university hospital. SETTING: Department of Otorhinolaryngology and Maxillofacial Surgery, University Clinical Center Tuzla, Bosnia and Herzegovina. METHOD: The analysis of the cases of aspirated foreign bodies within the period from January 1954 to December 2004. The analyzed patients were the children up to 14 years of age. All cases underwent the bronchoscopy. Each patient was analyzed for age, sex, nature and location of the foreign body, results of bronchoscopic removal, complications of bronchoscopy and presence of foreign bodies in the airways. RESULTS: Six hundred and sixty-two children who underwent bronchoscopy for removal of foreign body in the airways were evaluated. From evaluated children 66.8% were boys, ages ranging from 9 months to 14 years. Foreign bodies were more frequent in children under 3 years of age (65.2%). Most of the foreign bodies removed were organic (87.1%) and more frequently found in the right bronchial tree (53%). CONCLUSIONS: More attention is necessary to the prevention of aspirations. Prevention of aspiration of foreign bodies is better than cure. Public awareness through mass media needs attention to prevent foreign body inhalation.

**5. Tahirovic H, Imsiragic-Zovko S, Toromanovic A, Begic L. Assessment of the success of implementation of new rule book on salt iodination in Federation of Bosnia and Herzegovina. J Endocrinol Invest. 2007;30(1):9-12.**

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The aim of this study was to determine the success of an increase in the level of salt iodization which was increased to 20-30 mg iodine per kilo of salt, 2 yr after the introduction of the new mandatory salt iodination. This prospective study was performed at level of Federation of Bosnia and Herzegovina (FBH). We singled out 60 cluster school-based surveys (6 cluster surveys in each canton) with equal representation of urban and rural areas. Within each cluster, between 10 to 30 subjects (both males and females) aged 11, 12, 13 and 14 were randomly selected. The study included a total of 962 schoolchildren. The mean iodine level per 1 kg of salt for whole FBH was 21.4+/-5.2. It ranged from 2.1 to 41.3 mg/kg. A significant improvement in urinary iodine excretion medians was detected in the current survey in all cantons and on the entire territory of FBH, compared to results from a previous study conducted in 1999. The urinary iodine excretion in schoolchildren in the whole FBH varied from 50.6 to 303.8 mug/l with a median of 139.5 mug/l. Values of urinary iodine <100.0 mug/l were found in 15.9% of samples of schoolchildren, whereas no values <50.0 mug/l were found. In conclusion, the results of the study indicate that increased iodine supplementation of salt in 2001 was successful and that FBH is presently iodine sufficient. In the future, however, program for monitoring of iodine prophylaxis has to have two major aims: firstly, control of iodine content in salt at different levels especially at retail shops and at imported salt and secondly, iodine deficiency disorders control. Also, a periodic measurement of urinary iodine excretion needs to be planned together with the neonatal TSH screening and the establishment of a notification system for cases of hyperthyroidism.

**6. Salkic NN, Zildzic M, Muminhodzic K, Pavlovic-Calic N, Zerem E, Ahmetagic S, Mott-Divkovic S, Alibegovic E. Intrafamilial transmission of hepatitis B in Tuzla region of Bosnia and Herzegovina. Eur J Gastroenterol Hepatol. 2007 Feb;19(2):113-8.**

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**OBJECTIVE:** To determine (i) the prevalence of HBV infection in families of confirmed chronic carriers, (ii) possible routes of transmission and risk factors for the intrafamilial transmission, (iii) vaccination rate among family members of chronic carriers and (iv) family members with highest risk for infection. **METHODS:** A total of 172 family members of 67 hepatitis B surface antigen chronic carriers were tested for hepatitis B markers; 716 first-time blood donors from the same area were used as controls. **RESULTS:** Prevalence of hepatitis B surface antigen was higher ( $P<0.001$ ) among family members of index cases (12.2%; 21/172) than among controls (3.6%; 26/716) with relative risk of 3.3 (95% confidence Intervals=1.9-5.8;  $P<0.05$ ). Rate of exposure among family members was 37.8% (65/172); only 8.7% (15/172) had been vaccinated for hepatitis B virus. Difference ( $P<0.001$ ) in exposure existed among family members; exposure increased with age ( $\rho=0.34$ ;  $P<0.001$ ). Prevalences of hepatitis B surface antigen positivity and hepatitis B virus exposure were higher among parents of index cases ( $P<0.005$ ) and among offspring of female index cases ( $P<0.001$ ). There were more ( $P<0.001$ ) hepatitis B surface antigen-positive family members among those with mother-children relationship with index case (13/31; 41.9%) than among those with father-children (19/85; 29.4%) and horizontal (siblings and spouses) relationship (2/56; 3.6%). Significantly more ( $P<0.001$ ) hepatitis B surface antigen-positive and hepatitis B virus-exposed offspring were found in families where only mother was hepatitis B surface antigen positive. Among family members of HBeAg-positive cases more hepatitis B surface antigen-positive cases and hepatitis B virus-exposed cases have been found ( $P<0.001$ ). Combination of HBeAg positivity and female sex of index case significantly increased risk for chronic carriage among family members (relative risk=24.06; 95% confidence interval=8.88-65.21;  $P<0.05$ ). **CONCLUSION:** In the area studied, both horizontal and vertical transmission exists, but maternal route is predominant. Female sex, HBeAg positivity of index carrier and presence of hepatitis B surface antigen-positive mother inside family increased risk for hepatitis B surface antigen positivity and exposure among family members. Vaccination rate of family members of index cases is alarmingly low.

**7. Bergsland J, Kabil E, Mujanovic E, Terzic I, Røislien J, Svennevig JL, Fosse E. Training of cardiac surgeons for Bosnia and Herzegovina: outcomes in coronary bypass grafting surgery. Ann Thorac Surg. 2007;83(2):462-7.**

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**BACKGROUND:** Bosnia and Herzegovina did not have invasive cardiac diagnosis or cardiac surgery before the recent war. With assistance from the United States and Norway, a cardiovascular clinic was developed. This study reports center-specific and surgeon-specific clinical outcomes. Since off-pump coronary bypass grafting surgery was prioritized in the treatment of coronary disease, a comparison was made between operations performed with and without cardiopulmonary bypass. **METHODS:** Surgeons and key staff members were trained in the United States. A Norwegian data management system for cardiac surgery was implemented and cases entered after quality review of the data. A total of 1276 patients were entered; operations were performed with cardiopulmonary bypass in 540 and without in 736. The primary surgeon was entered as a variable in an anonymous fashion. **RESULTS:** Overall mortality for coronary bypass grafting surgery was 1.6%, and the major complication rate was 4.5%. Patients operated on off-pump received fewer grafts and had a shorter length of stay. Unfavorable outcome was more common in patients when cardiopulmonary bypass was used in the operation. Regression analysis demonstrated that the European System for Cardiac Operative Risk Evaluation (EuroSCORE) and use of cardiopulmonary bypass were predictors of poor outcome. The individual surgeon factor did not impact on outcomes. **CONCLUSIONS:** Our study confirms that coronary artery bypass grafting surgery may be performed safely in a poor country in a hospital without experience with cardiac surgery. Selection of talented staff and cooperation with international cardiac centers are crucial. Off-pump coronary artery bypass grafting surgery is suitable for a new center and does not require more training than standard procedures.

**8. Zerem E, Salkic N, Imamovic G, Terzić I. Comparison of therapeutic effectiveness of percutaneous drainage with antibiotics versus antibiotics alone in the treatment of periappendiceal abscess: is appendectomy always necessary after perforation of appendix? Surg Endosc. 2007;21(3):461-6.**

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**BACKGROUND:** The present study was designed to compare the therapeutic effectiveness of percu-

taneous drainage with antibiotics versus antibiotics alone in the treatment of appendicitis complicated by periappendiceal abscess. **METHODS:** In a prospective study, 50 patients with acute appendicitis complicated by periappendiceal abscess  $> \text{ or } = 3$  cm in size were randomly assigned to two groups. The first group received treatment with ultrasound guided-percutaneous drainage and i.v. antibiotics (ampicillin, cefuroxime, and metronidazole), and the other group received antibiotics only. Patient's baseline characteristics, duration of hospital stay, and treatment outcome and complications were analyzed. **RESULTS:** Appendectomy was avoided in 16/25 patients in the drainage group and 2/25 patients in the non-drainage group during follow-up with RR of 0.39 (95% CI = 0.29-0.62;  $p < 0.05$ ). One patient in the drainage group and 8 patients in the non-drainage group underwent surgery in the first month after the beginning of treatment. Eight patients in the drainage group and 15 in the non-drainage group underwent interval appendectomy. There was no statistically significant difference between the two groups regarding patient demographics, abscess size, and pretreatment clinical symptoms. Hospital stay up to the subsidence of clinical and sonographic signs was significantly shorter ( $p < 0.001$ ) in the drainage group, with a mean difference of 6.4 days (95% CI = 5.0-7.9;  $p < 0.05$ ). **CONCLUSIONS:** Percutaneous drainage with antibiotics is a safe and effective way of treating acute perforated appendicitis. The recurrence rate for these patients is relatively low, and very often interval appendectomy is not required. For patients with periappendiceal abscess  $> \text{ or } = 3$  cm in diameter, antibiotic therapy alone is insufficient and the recurrence rate is high.

**9. Tahirović H, Toromanović A. Incidence of type 1 diabetes mellitus in children in Tuzla Canton between 1995 and 2004. Eur J Pediatr. 2007;166(5):491-2.**

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Mulaomerović A, Halilbasić A, Cickusić E, Zavasnik-Bergant T, Begić L, Kos J. Cystatin C as a potential marker for relapse in patients with non-Hodgkin B-cell lymphoma. *Cancer Lett.* 2007;18;248(2):192-7.

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The concentration of cysteine protease inhibitor cystatin C was determined in sera from 59 patients with non-Hodgkin B-cell lymphoma using ELISA. The sera from 43 age and sex mat-

ched healthy blood donors served as controls. Cystatin C was significantly increased in sera of patients without therapy (mean 1136+/-SE 105.7ng/ml,  $p=0.00001$ ) and with therapy (mean 1073+/-52ng/ml,  $p=0.001$ ) compared to controls (mean 819+/-28ng/ml). The highest levels were determined in sera of patients with a relapse (mean 1680+/-196ng/ml). By using immunofluorescence staining and confocal microscopy we determined immature dendritic cells as a major population of cystatin C positive cells in affected lymph nodes. Our study reports for the first time that cystatin C is a potential marker for relapse in patients with non-Hodgkin B-cell lymphoma.

**OSTALE INDEKSACIJE**  
*OTHER INDEX*

**11. Pajević I, Hasanović M, Delić A. The influence of religious moral beliefs on adolescents' mental stability. Psychiatr Danub. 2007; 19(3):173-83.**

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**AIM:** The aim of this paper is to determine the influence of religious moral beliefs on the stability of adolescents' mental health. **METHODS:** The sample consists of 240 mentally and physically healthy male and female adolescents attending a high school, who are divided into groups equalized by gender (male and female), age (younger 15, older 18 years); school achievement (very good, average student); behaviour (excellent, average); family structure (complete family with satisfactory family relations), and level of exposure to psycho-social stress (they were not exposed to specific traumatizing events). Subjects were assessed with regard to the level of belief in some basic ethical principles that arise from religious moral values. The score of religious moral belief index was used to compare two groups of subjects. For sample selection the measuring instruments were used to assess the religious, moral and social profile of subject. For the assessment of personality structure a standardized test battery (Freiburg's Personality Questionnaire/ Das Freiburger Persönlichkeitsinventar - FPI, Profile Index of Emotions - PIE, Life Style Questionnaire - OM) was used to assess personality profile, emotional profile and subject's defence orientation. **RESULTS:** The score of the moral belief index was negatively correlated to neuroticism and depressiveness (Pearson's  $r=-0.242$ ,  $P<0.001$ ;  $r=-0.311$ ,  $P<0.001$ , respectively). Spontaneous and reactive aggressiveness and irritability were negatively correlated with the

score of moral belief index (Pearson's  $r=-0.197$ ,  $P=0.002$ ;  $r=-0.147$ ,  $P=0.023$ ;  $r=-0.350$ ,  $P<0.001$ , respectively). Emotional instability is negatively associated with the moral belief index of the investigated adolescents (Pearson's  $r=-0.324$ ,  $P<0.001$ ). The moral belief index was highly negatively correlated with repression ( $r=-0.206$ ,  $P=0.001$ ), regression ( $r=-0.325$ ,  $P<0.001$ ), compensation ( $r=-0.186$ ,  $P=0.004$ ), transfer ( $r=-0.290$ ,  $P<0.001$ ) and defensive orientation ( $r=-0.129$ ,  $P=0.046$ ). Verified intellectualisation and reactive formation are in positive correlation with the moral belief index among our investigated adolescents (Pearson's  $r=0.168$ ,  $P=0.009$ ;  $r=0.356$ ,  $P<0.001$ , respectively). **CONCLUSIONS:** A higher index of religious moral beliefs in adolescents enables better control of impulses, providing better mental health stability. It enables neurotic conflicts typical for adolescence to be more easily overcome. It also causes healthier reactions to external stimuli. A higher index of religious moral beliefs of young people provides a healthier and more efficient mechanism of anger control and aggression control. It enables transformation of that psychical energy into neutral energy which supports the growth and development of personality, which is expressed through socially acceptable behaviour. In this way, it helps growth, development and socialization of the personality, leading to the improvement in mental health.

**12. Avdibegović E, Bećirović E, Selimbasić Z, Hasanović M, Sinanović O. Cerebral cortical atrophy and silent brain infarcts in psychiatric patients. Psychiatr Danub. 2007;19 (1-2):49-55.**

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**AIM:** To assess the frequency of silent brain infarcts and cerebral cortical atrophy in psychiatric patients with cognitive dysfunction. **METHODS:** One hundred and ninety four patients with cognitive dysfunction determined by the use of the Benton Visual Retention Test and Wechsler Memory Scale were analyzed according to age, gender, education, duration of psychiatric treatment, presence of mental disorders, neurological findings, and CT scan of neurocranium. The results were analyzed using descriptive statistics. **RESULTS:** Average age of the group of patients studied was  $48+/-9.7$  years, and average duration of psychiatric treatment was  $6+/-7.3$  years. Regarding mental disorders, patients suffered from posttraumatic stress disorder (PTSD) in comorbidity with depression (21.1%), depressive

disorder (14.4%), Complex PTSD (13.9%), PTSD (11.3%), and post-concussion syndrome (7.7%). Cerebral cortical atrophy was determined in 47.4%, silent brain infarct in 3.6%, whereas the combination of cerebral cortical atrophy and silent brain infarct was found in 26.3% of patients. In 29.6% of patients with cognitive dysfunction on the Benton Visual Retention Test and Wechsler Memory Scale CT scan findings were completely normal. Cerebral cortical atrophy was more frequent in patients with PTSD in comorbidity with depression (43%), PTSD (39.0%), Complex PTSD (26%), depression (25%), whereas the silent brain infarct was more frequent in patients with post-concussion syndrome (53.3%) and depression (42.8%). **CONCLUSION:** Cerebral cortical atrophy and silent brain infarct are frequent findings in computerized tomography of the brain in psychiatric patients with cognitive dysfunction. Cerebral atrophy is frequent in patients with PTSD, whereas in patients with depression, besides cerebral atrophy, silent brain infarct is also frequently present.

**13. Tahirovic H, Toromanovic A. How far are physical education teachers from elementary school prepared to help pupils with diabetes while they are at school? Minerva Pediatr. 2007;59(6):767-73.**

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**AIM:** The aim of the study is to estimate how far physical education teachers from elementary school understand diabetes and are trained in its management and in the treatment of diabetes emergencies according to their understanding. **METHODS:** In the study a descriptive research method has been used and a closed type survey for data gathering has been employed. The study included 83 physical education teachers from 83 primary schools. They have been divided into 2 groups: the first consisting of 28 physical education teachers whose schools are attended by at least one child with diabetes type 1, the second consisting of 55 physical education teachers whose schools do not have children with diabetes type 1. **RESULTS:** In answer to the question about whether the physical education teachers are able to recognize the symptoms of hypoglycemia a larger number of school staff in the first group answered "yes" compared to the second group, while interest in education in comparison to lack of interest was significantly present in both groups. As for the question: "Is glucose or meal allowed in the classroom?", in the first group there were

more positive answers, while in the second group there was no difference in terms of positive and negative answers. As for the question "Is blood glucose testing allowed in the classroom?" there was a difference between the groups: the first group's answers were significantly positive while the second group's negative. **CONCLUSIONS:** The results of our survey show that children with diabetes do not have appropriate diabetes care in school and that school staff want to solve this problem.

**14. Tahirović H, Toromanović A, Feukić A, Ostrvica D. Clinical and laboratory characteristics at onset of type 1 diabetes mellitus in Children. Lijec Vjesn. 2007; 129(3-4): 61-5.**

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The aim was to describe the clinical and laboratory characteristics of diabetes mellitus type 1 at its onset. The hospital records at Tuzla pediatric hospital were analysed of 109 children aged 0-14

who presented with diabetes between 1990 and 2005. The data base was divided into three age groups: 0-4.9, 5-9.9 and 10-14 years - referred to hereafter as the younger, middle and older age groups. We found the duration of symptoms prior to diagnosis to be significantly shortest in the younger age group. Polyuria, polydipsia and weight loss were the main presenting symptoms in all age groups. The median blood glucose value was 26.0 mmol/L and the pH value was 7.30. The incidence of diabetic ketoacidosis of 48.0% and the median HbA 1c value of 10.7% at diagnosis indicate that disease was not recognised long before diagnosis. Since our desire is to avoid the development of ketoacidosis, it is necessary to educate people who are in permanent contact with children about the symptoms of diabetes type 1. This could to a certain degree prevent the presentation of the life-threatening condition of diabetic ketoacidosis, if the occurrence of diabetes cannot be prevented.

Pripremio/completed:

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