

International publications of authors from Bosnia and Herzegovina in Current Contents indexed publications in the second half of 2011*

Beganović A, Bašić B, Gazdić-Šantić M, Kulić M, Spuzić M, Skopljak-Beganović A, Drljević A, Samek D. Occupational and patient exposure in interventional cardiology in Bosnia and Herzegovina. Radiat Prot Dosimetry. 2011 Sep;147(1-2):102-5. Epub 2011 Jul 14.

Department of Medical Physics and Radiation Safety, Clinical Centre of Sarajevo University, Bolnička 25, Sarajevo, Bosnia and Herzegovina.

Monitoring of professionally exposed workers in Bosnia and Herzegovina started in 1960s. Doses received by patients and professionals in interventional cardiology are high in comparison with other practices in medicine. The purpose of this study is to present personal and patient dosimetry data. Results show increase in doses of personnel in interventional cardiology. Total collective dose for four cardiology centres in Bosnia and Herzegovina increased from 15 person mSv in 2007 to 52 person mSv in 2010. This increase mainly corresponds to higher number of personnel and increase in the number of procedures. Average monthly dose has increased from 0.40 to 0.72 mSv in the same period. The results of occupational and patient doses in interventional cardiology are similar to results reported in the literature. It is of great importance for professionals working in this field to be educated in radiation protection and proper use of X-ray equipment.

Čehajić-Clancy S, Efron DA, Halperin E, Liberman V, Ross LD. Affirmation, acknowledgment of in-group responsibility, group-

based guilt, and support for reparative measures. J Pers Soc Psychol. 2011 Aug;101(2):256-70.

Department of Political Science and International Relations, Sarajevo School of Science and Technology, Bistrik 7, Sarajevo, Bosnia and Herzegovina.

Three studies, 2 conducted in Israel and 1 conducted in Bosnia and Herzegovina, demonstrated that affirming a positive aspect of the self can increase one's willingness to acknowledge in-group responsibility for wrongdoing against others, express feelings of group-based guilt, and consequently provide greater support for reparation policies. By contrast, affirming one's group, although similarly boosting feelings of pride, failed to increase willingness to acknowledge and redress in-group wrongdoing. Studies 2 and 3 demonstrated the mediating role of group-based guilt. That is, increased acknowledgment of in-group responsibility for out-group victimization produced increased feelings of guilt, which in turn increased support for reparation policies to the victimized group. Theoretical and applied implications are discussed.

Delibegović S. The Use of a Single Hem-o-lok Clip in Securing the Base of the Appendix During Laparoscopic Appendectomy. J Laparoendosc Adv Surg Tech A. 2012 Jan;22(1):85-7. Epub 2011 Dec 6.

Department of Surgery, University Clinic Center Tuzla, Tuzla, Bosnia and Herzegovina.

Background: During laparoscopic appendectomy, the standard technique in securing the base of the appendix is by endoloop ligatures or a stapler. We ear-

*Data for this survey were collected from PubMed database using the keywords Bosnia and Herzegovina and 2011.

lier demonstrated the possibility of the application of a double Hem-o-lok® clip in securing of the base of the appendix. The application of only one plastic clip would, however, lower the cost of the laparoscopic procedure even further and shorten the surgery time. The objective of this prospective study was to evaluate the possible advantages of securing of the base of the appendix using only one Hem-o-lok clip. Patients and Methods: The 90 patients with acute appendicitis were randomly divided into three groups: In the first group, the base of the appendix was secured using one endoloop ligature, in the second group using a 45-mm stapler, and in the third group using only one nonabsorbable Hem-o-lok clip. The data collected included age, gender, surgery time, time of endoloop/stapler/clip application, hospital stay, costs associated with these, and intra- and postoperative complications. Results: There were no significant differences in hospital stay among the three groups of patients; but the average time of the operation was significantly longer in the endoloop group than in the stapler group ($P=0.002$), whereas the endoloop and Hem-o-lok groups were not statistically different ($P=0.22$). The time of application of the endoloop was significantly longer than for the stapler ($P<0.0001$) and Hem-o-lok ($P<0.0001$) groups. The time of application of the stapler was significantly shorter than that of the Hem-o-lok ($P<0.0001$). However, the price of one endoloop is €28.85, for the stapler is €230.7, and for one Hem-o-lok clip is €2.35. Conclusion: The use of one Hem-o-lok clip is as safe as an endoloop and/or stapler; however, the time of the laparoscopic procedure using the Hem-o-lok was shorter in comparison with the use of an endoloop, with the cost of the procedure being the lowest.

Dizdarević K, Hamdan A, Omerhodžić I, Kominlija-Smajčić E. Modified Lund concept versus cerebral perfusion pressure-targeted therapy: A randomised controlled study in patients with secondary brain ischaemia. Clin Neurol Neurosurg. 2012 Feb;114(2):142-8. Epub 2011 Oct 28.

Department of Neurosurgery, Clinical Center University of Sarajevo, Bolnička 25, Sarajevo, Bosnia and Herzegovina.

PURPOSE: Secondary brain ischaemia (SBI) usually develops after aneurysmal subarachnoid haemorrhage (SAH) and severe traumatic brain injury (TBI). Current approaches to managing these conditions are based either on intracranial pressure-targeted therapy (ICP-targeted) with cerebral microdialysis (CM) monitoring according to the modified Lund concept or cerebral perfusion pressure-targeted therapy (CPP-targeted). We present a prospective, randomised controlled study comparing relative effectiveness of the

two management strategies. **METHODS:** Sixty comatose operated patients with SBI following aneurysmal SAH and severe TBI were randomised into ICP-targeted therapy with CM monitoring and CPP-targeted therapy groups. Mortality rates in both groups were calculated and tissue biochemical signs of cerebral ischaemia were analysed using CM. Measured CM data were related to outcome (Glasgow Outcome Scale [GOS] score 1, 2 and 3 for poor outcome or GOS score 4 and 5 for good outcome). **RESULTS:** Patients treated with ICP-targeted therapy with CM monitoring had significantly lower mortality rate as compared with those treated with CPP-targeted therapy ($P=0.03$). Patients monitored with CM who had poor outcome had lower mean values of glucose and higher mean values of glycerol and lactate/pyruvate ratio as compared with those who had good outcome (glucose: $P=0.003$; glycerol: $P=0.02$; lactate/pyruvate ratio: $P=0.01$). There was no difference in the mortality outcome between aneurysmal SAH and severe TBI in the two groups ($P=0.28$ for ICP-targeted therapy with CM monitoring, $P=0.36$ for CPP-targeted therapy). Also, there were no differences in the CM values between patients with aneurysmal SAH and severe TBI who underwent ICP-targeted therapy (glucose: $P=0.23$; glycerol: $P=0.41$; lactate/pyruvate ratio: $P=0.40$). **CONCLUSION:** The modified Lund concept, directed at bedside real-time monitoring of brain biochemistry by CM showed better results compared to CPP-targeted therapy in the treatment of comatose patients sustaining SBI after aneurysmal SAH and severe TBI.

Erić J, Stančić I, Šojić LT, Popovac AJ, Tsakos G. Validity and reliability of the Oral Impacts on Daily Performance (OIDP) scale in the elderly population of Bosnia and Herzegovina. Gerodontology. 2011 Nov 21. doi: 10.1111/j.1741-2358.2011.00584.x. [Epub ahead of print]

Department of Prosthodontics, Faculty of Medicine, University of East Sarajevo, Foča, Bosnia and Herzegovina; Clinic for Prosthetic Dentistry, Faculty of Dentistry, University of Belgrade, Belgrade, Serbia; Department of Epidemiology and Public Health, University College of London, London, UK.

Validity and reliability of the Oral Impacts on Daily Performance (OIDP) scale in the elderly population of Bosnia and Herzegovina **Objectives:** To adapt the Oral Impacts on Daily Performance (OIDP) index for elderly people in Bosnia and Herzegovina and test its validity, reliability and responsiveness to change. **Background:** Clinical measures alone may not be adequate for assessing the oral health of individuals. Subjective oral health indicators tested within a particular cultural context may not be relevant across cultures. **Materials and methods:** The study popula-

tion comprised 231 free-living adults aged 65 years or older. The OIDP was cross-culturally adapted from English into the Serbian language and its psychometric properties were tested. Data were collected using a clinical examination and a questionnaire containing the OIDP. Results: In terms of reliability, Cronbach's alpha coefficient was 0.82 and the intraclass correlation coefficient 0.88. The very high correlation of OIDP with self-rated oral health ($r = 0.78$) verified criterion validity, while construct validity was demonstrated through its significant and graded associations with other subjective health measures. OIDP change scores on a treated subsample showed moderate effect size (0.59) and were associated with perceptions of oral health change, providing evidence for its responsiveness to change. Conclusion: The Bosnian version of the OIDP showed satisfactory validity, reliability and responsiveness to change confirming its appropriateness for use among older populations in Bosnia and Herzegovina.

Gavranović H, Chauve C, Salse J, Tannier E. Mapping ancestral genomes with massive gene loss: a matrix sandwich problem. *Bioinformatics*. 2011 Jul 1;27(13):i257-65.

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MOTIVATION: Ancestral genomes provide a better way to understand the structural evolution of genomes than the simple comparison of extant genomes. Most ancestral genome reconstruction methods rely on universal markers, that is, homologous families of DNA segments present in exactly one exemplar in every considered species. Complex histories of genes or other markers, undergoing duplications and losses, are rarely taken into account. It follows that some ancestors are inaccessible by these methods, such as the proto-monocotyledon whose evolution involved massive gene loss following a whole genome duplication. **RESULTS:** We propose a mapping approach based on the combinatorial notion of 'sandwich consecutive ones matrix', which explicitly takes gene losses into account. We introduce combinatorial optimization problems related to this concept, and propose a heuristic solver and a lower bound on the optimal solution. We use these results to propose a configuration for the proto-chromosomes of the monocot ancestor, and study the accuracy of this configuration. We also use our method to reconstruct the ancestral boreoeutherian genomes, which illustrates that the framework we propose is not specific to plant paleogenomics but is adapted to reconstruct any ancestral genome from extant genomes with heterogeneous marker content.

Haverić S, Haverić A, Bajrović K, Galić B, Maksimović M. Effects of dipotassium trioxohydroxytetrafluorotriborate ($K_2[BO_3F_4OH]$) on genetic material and inhibition of cell division in human cell cultures. *Drug Chem Toxicol*. 2011 Jul;34(3):250-4.

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We have examined antiproliferative, cytotoxic, and genotoxic potential of a halogenated boroxine dipotassium trioxohydroxytetrafluorotriborate ($K_2[B_3O_3F_4OH]$). The impact on cell growth was evaluated by alamarBlue assay in basal cell carcinoma culture. Cytostatic, cytotoxic, and genotoxic potential were evaluated in lymphocytes culture, applying cytokinesis-block micronucleus cytome assay and chromosome aberrations analysis. Tested concentrations (0.05, 0.1, 0.2, and 0.4 mg/mL) were correlated with inhibition of cell growth in basal cell carcinoma culture and with the lymphocytes proliferation. Clastogenic activity has been confirmed, without evidences of aneugenic activity, in human lymphocytes.

Hudić I, Szekeres-Bartho J, Fatušić Z, Stray-Pedersen B, Dizdarević-Hudić L, Latifagić A, Hotić N, Kamerić L, Mandžić A. Dydrogesterone supplementation in women with threatened preterm delivery--the impact on cytokine profile, hormone profile, and progesterone-induced blocking factor. *J Reprod Immunol*. 2011 Dec;92(1-2):103-7. Epub 2011 Oct 26.

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Progesterone is indispensable in creating a suitable endometrial environment for implantation, and also for the maintenance of pregnancy. Successful pregnancy depends on an appropriate maternal immune response to the fetus. A protein called progesterone-induced blocking factor (PIBF) acts by inducing Th2-dominant cytokine production to mediate the immunological effects of progesterone. The aim of this prospective study was to compare serum concentrations of progesterone (P), estradiol (E2), anti-inflammatory (IL-10) and pro-inflammatory (IL-6, TNF α , IFN γ) cytokines, and serum PIBF concentrations in women with threatened preterm delivery who were given progesterone supplementation (study group) with those of women with threatened preterm delivery who were not given progesterone supplementation (control group). After dydrogesterone treatment of patients in the study group, serum PIBF as well as progesterone concentrations significantly increased. Women in this

group had significantly higher serum levels of IL-10 than controls. The length of gestation was significantly higher in the group of women who were given progesterone supplementation. Our data suggest that dydrogesterone treatment of women at risk of preterm delivery results in increased PIBF production and IL-10 concentrations, and lower concentrations of IFN γ .

Ibragić S, Sofić E, Suljić E, Avdagić N, Bajraktarević A, Tahirović I. Serum nitric oxide concentrations in patients with multiple sclerosis and patients with epilepsy. J Neural Transm. 2012 Jan;119(1):7-11. Epub 2011 Jul 21.

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Nitric oxide (NO), a neurotransmitter and a free radical, has been purported to be involved in numerous neurological diseases. We investigated the serum nitric oxide concentration in 30 patients with multiple sclerosis (MS), in 30 patients with epilepsy and in 30 control subjects. The aim was also to determine whether a statistically significant difference in serum NO concentrations exists between the groups of interest. The total serum nitric oxide concentration was measured using the Griess reaction after reducing nitrates to nitrites with elemental zinc. In the group multiple sclerosis, the mean NO concentrations were $X \pm SEM = 31.02 \pm 1.79 \mu\text{mol/l}$, in the control group $X \pm SEM = 25.31 \pm 1.44 \mu\text{mol/l}$ and in the group epilepsy $X \pm SEM = 22.51 \pm 1.28 \mu\text{mol/l}$. Student's t test showed a statistically significant difference between subjects with multiple sclerosis and the control group ($p = 0.013$), as well as between the groups multiple sclerosis and epilepsy ($p = 0.0002$). This data confirms that NO may play an important role in the pathogenesis of multiple sclerosis, whereas its role in epilepsy still remains unclear.

Jovanović P, Salkić NN, Zerem E, Ljuca F. Biochemical and ultrasound parameters may help predict the need for therapeutic endoscopic retrograde cholangiopancreatography (ERCP) in patients with a firm clinical and biochemical suspicion for choledocholithiasis. Eur J Intern Med. 2011 Dec;22(6):e110-4. Epub 2011 Mar 5.

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BACKGROUND: Prediction of the need for therapeutic endoscopic retrograde cholangiopancreatography (ERCP) in patients with suspected choledocholithiasis (CDL) remains a challenging task. **AIMS:** We aimed to evaluate the predictive value of biochemical and

ultrasound parameters and to create a corresponding model for prediction of the need for therapeutic ERCP. **METHODS:** 203 consecutive patients referred to our center due to a firm clinical and/or biochemical suspicion for CDL. All patients underwent ERCP. Biochemical and ultrasound variables were analyzed. **RESULTS:** The sample was divided into testing group (103; 50.7%) and validation group (100; 49.3%) which did not differ in their baseline characteristics. Elevated gamma glutamil transaminase (GGT), common bile duct (CBD) diameter and presence of hyperechoic structures in CBD were found to be significant predictors for presence of CBD stones on ERCP ($p < 0.05$) in the testing group. We used these variables to construct a predictive model for the presence of CBD stones on ERCP. The model was tested on a second, validation group of patients using ROC analysis with the area under the ROC curve of 0.81 (95% CI=0.75-0.86; $p < 0.001$). We identified a threshold (0.86) above which, patients had a high probability (93.1%) for the need for interventional ERCP. **CONCLUSION:** Our predictive model may help predict the need for therapeutic ERCP in patients with a suspicion for choledocholithiasis.

Mešić E, Bock A, Major L, Vaslaki L, Berta K, Wikstrom B, Canaud B, Wojke R. Dialysate saving by automated control of flow rates: comparison between individualized online hemodiafiltration and standard hemodialysis. Hemodial Int. 2011 Oct;15(4):522-9. doi: 10.1111/j.1542-4758.2011.00577.x. Epub 2011 Jul 26.

University Clinical Centre, Tuzla, Bosnia and Herzegovina.

Cost reduction and quality improvement seem to be conflicting issues. However, online hemodiafiltration (oHDF) with new automatic functions offers a cost-efficient therapy compared to hemodialysis (HD). Seven dialysis centers conducted a randomized clinical trial with cross-over design: high-flux HD vs. postdilutional oHDF with functions coupling both dialysate and substitution flow rates to blood flow rates. During the 6 weeks of the study, all treatment parameters remained unchanged for HD and oHDF, apart from dialysate and substitution flow rate. Treatment data were recorded during each treatment, and predialytic and postdialytic concentrations of urea were recorded at the end of each study phase. The analysis involved 956 treatments of 54 patients. The mean dialysate consumption was $123.2 \pm 6.4 \text{ l}$ for HD and $113.4 \pm 14.9 \text{ l}$ for oHDF ($p < 0.0001$), the mean dialysis dose was 1.42 ± 0.23 for HD and 1.47 ± 0.26 for oHDF ($p < 0.0001$); oHDF resulted in a lower dialysate consumption (8.0% less) and a slightly increased dialysis dose (Kt/V 3.5% higher) compared to HD. oHDF with

the investigated automatic functions offers substantial savings in dialysate consumption without decreasing dialysis dose.

Mujagić S, Sarihodžić S, Huseinagić H, Karasalihović Z. Wegener's granulomatosis of the paranasal sinuses with orbital and central nervous system involvement-diagnostic imaging. Acta Neurol Belg. 2011 Sep;111(3):241-4.

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Wegener's granulomatosis (WG) is a systemic vasculitis that can affect any organic system, but primarily involves the upper and lower respiratory tracts and the kidneys. WG relatively frequently affects the nervous system (in 30-50%), usually in the form of peripheral or cranial neuropathy. Involvement of the brain is reported in a very small percentage of patients (2%-8%). Three major mechanisms have been described as the cause of central nervous system (CNS) disease in WG: contiguous invasion of granuloma from extracranial sites, remote intracranial granuloma and CNS vasculitis. CNS involvement caused by contiguous invasion of granuloma from extracranial sites is the rarest. We report the case of a 37-year-old man with WG, manifested as a pulmonary and paranasal sinuses disease, with orbital and CNS involvement, caused by contiguous invasion from the paranasal sinuses. In this report, the rich spectrum of findings achieved by computed tomography and magnetic resonance are demonstrated. The importance of computed tomography in bony destruction PNS findings, and the importance of MR imaging in evaluation of the direct intracranial spread from nasal, paranasal and orbital disease are also emphasized.

Mušanović J, Filipovska-Mušanović M, Kovačević L, Buljugić Dž, Džehverović M, Avdić J, Marjanović D. Determination of combined sibship indices »gray zone« using 15 STR loci for central Bosnian human population. Mol Biol Rep. 2011 Dec 10. [Epub ahead of print]

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In our previous population studies of Bosnia and Herzegovina human population, we have used autosomal STR, Y-STR, and X-STR loci, as well as Y-chromosome NRY biallelic markers. All obtained results were included in Bosnian referent database. In order of future development of applied population molecular genetics researches of Bosnia and Herzegovina human population, we have examined the effectiveness of 15 STR loci system in determination of sibship by using

15 STR loci and calculating different cut-off points of combined sibship indices (CSI) and distribution of sharing alleles. From the perspective of its application, it is very difficult and complicated to establish strict CSI cut-off values for determination of the doubtless sibship. High statistically significant difference between the means of CSI values and in distribution of alleles sharing in siblings and non-siblings was noticed ($P < 0.0001$). After constructing the »gray zone«, only one false positive result was found in three CSI cut-off levels with the highest percent of determined sibship/non-sibship at the $CSI = 0.067$, confirming its practical benefit. Concerning the distribution of sharing alleles, it is recommended as an informative estimator for its usage within Bosnia and Herzegovina human population.

Petričević J, Punda H, Brakus SM, Vukojević K, Govorko DK, Alfirević D, Kvesić A, Saraga-Babić M. Immunolocalization of nestin, mesothelin and epithelial membrane antigen (EMA) in developing and adult serous membranes and mesotheliomas. Acta Histochem. 2011 Nov 21. [Epub ahead of print]

Department of Pathology, Cytology and Forensic Medicine, University Clinical Hospital Mostar, Bijeli brijeg bb, Mostar, Bosnia and Herzegovina; Department of Histology and Embryology, School of Medicine, University of Mostar, Bijeli brijeg bb, Mostar, Bosnia and Herzegovina.

The spatial and temporal distribution of epithelial membrane antigen (EMA), mesothelin and nestin was immunohistochemically analyzed in developing and adult human serous membranes and mesotheliomas in order to detect possible differences in the course of mesenchymal to epithelial transformation, which is associated with differentiation of mesothelial cells during normal development and tumorigenesis. Pleura and pericardium developing from the visceral mesoderm gradually transform into mesothelial cells and connective tissue. EMA appeared in mesothelium of both serous membranes during the early fetal period, whereas during further development, EMA expression was retained only in the pericardial mesothelium. It increased in both pleural mesothelium and connective tissue. Mesothelin appeared first in pericardial submesothelial cells and later in surface mesothelium, while in pleura it was immediately localized in mesothelium. In adult serous membranes, EMA and mesothelin were predominantly expressed in mesothelium. Nestin never appeared in mesothelium, but in connective tissues and myocardial cells and subsequently decreased during development, apart from in the walls of blood vessels. Mesothelial cells in the two serous membranes developed in two separate devel-

opmental pathways. We speculate that submesothelial pericardial and mesothelial pleural cells might belong to a population of stem cells. In epithelioid mesotheliomas, 13% of cells expressed nestin, 39% EMA and 7% mesothelin.

Smajlović A, Berbić S, Žerovnik E. The cross-road between the mechanisms of protein folding and aggregation; study of human stefin B and its H75W mutant. Biochem Biophys Res Commun. 2011 Nov 18;415(2):337-41. Epub 2011 Oct 18.

Department of Biochemistry, Faculty of Pharmacy, University of Tuzla, Univerzitetska 1, Tuzla, Bosnia and Herzegovina.

The role of the aromatic residue at site 75 to protein stability, the mechanism of folding and the mechanism of amyloid-fibril formation were investigated for the human stefin B variant (bearing Y at site 31) and its point mutation H75W. With an aim to reveal the conformation at the cross-road between folding and aggregation, first, the kinetics of folding and oligomer formation by human stefin B(Y31) variant were studied. It was found to fold in three kinetic phases at pH 4.8 and 10% TFE; the pH and solvent conditions that transform the protein into amyloid fibrils at longer times. The same pH leads to the formation of native-like intermediate (known from previous studies of this variant), meaning that the process of folding and amyloid-fibril formation share the same structural intermediate, which is in this case native-like and dimeric. At pH 5.8 and 7.0 stefin B folded to the native state in four kinetic phases over two intermediates. In distinction, the mutant H75W did not fold to completion, ending in intermediate states at all pH values studied: 4.8, 5.8 and 7.0. At pH 4.8 and 5.8, the mutant folded in one kinetic phase to the intermediate of the »molten globule« type, which leads to the conclusion that its mechanism of folding differs from the one of the parent stefin B at the same pH. At pH 7.0 the mutant H75W folded in three kinetic phases to a native-like intermediate, analogous to folding of stefin B at pH 4.8.

Šimić D, Topić I, Penavić JŽ. Epidemiological and clinical characteristics of malignant melanoma in area of West Herzegovina from 1997 to 2010. Coll Antropol. 2011 Sep;35 Suppl 2:137-40.

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Incidence rate of cutaneous malignant melanoma (MM), one of the most aggressive skin tumours, is increasing nowadays. Etiology of MM has not been

fully understood. Various etiological factors are of relevance for the occurrence of the disease. The solar radiation as well as long term exposure to ultraviolet radiation has the greatest impact on development of this skin tumour. Melanoma risk factors have different associations with melanoma on body sites. This study investigates the epidemiological and clinical characteristics of MM such as age, gender, distribution of MM on the body and type of melanoma in the area of West Herzegovina, on the sample of 205 patients. It presents the occurrence of MM in the period from 1997. to 2010. Both, females and males have increased the risk of melanoma on the trunk (45.9%). Different body sites receive various amounts of sun exposure, yet melanomas occur on all parts of the body. This may represent different pathways in the etiology of melanoma based on body location. The most frequent type of MM was superficial spreading melanoma (SSM) 47.8%. According to our investigation incidence rate was 18.6% (per 1000 patients).

Tahirović H, Toromanović A. Perineal ectopic testis: a rare cause of empty scrotum. J Pediatr Endocrinol Metab. 2011;24(11-12):885.

Department for Research and Education, University Clinical Centre Tuzla, Tuzla, Bosnia and Herzegovina.

No abstract available.

Vranić S, Frković-Grazio S, Bilalović N, Gatalica Z. Angiogenesis in triple-negative adenoid cystic carcinomas of the breast. Virchows Arch. 2011 Oct;459(4):377-82. Epub 2011 Sep 4.

Department of Pathology, Clinical Center of the University of Sarajevo, Bolnička 25, Sarajevo, Bosnia and Herzegovina.

We compared microvascular density (MVD), lymph vessel density (LVD), and the expression of hypoxia pathway-associated proteins between primary triple-negative adenoid cystic carcinoma of the breast (TN-ACC) and grade-matched triple-negative breast carcinomas of no special type (TNBC). Twelve TN-ACC and 15 TNBC were investigated immunohistochemically for CD31, podoplanin (D2-40), von Hippel-Lindau protein (pVHL), and hypoxia-inducible factor-1alpha (HIF-1α) protein. All cases were lymph node negative (pN0). The study revealed a median MVD (CD31) of 34 vessels/mm(2) (mean ± SD, 41.33 ± 6.5/mm(2)) in the TN-ACC subgroup and a median of 55 microvessels (mean ± SD, 54.9 ± 6.3/mm(2)) in the TNBC subgroup. The median LVD (D2-40) was 10.5/mm(2) (mean ± SD, 11.9 ± 1.5/mm(2)) in the TN-ACC subgroup and 15.0/mm(2) (mean ± SD, 16.9 ± 2.5/mm(2)) lymph vessels in the

TNBC subgroup. The differences were not statistically significant ($P = 0.93$, $P = 0.67$, respectively). pVHL was detectable in all TN-ACCs whereas two cases of TNBC had less than 5% of the positive cells. HIF-1 α protein expression was significantly higher in the tumor cell population than in adjacent normal cells in both subgroups ($P = 0.009$ for TNBC and $P = 0.028$ for TN-ACC, respectively), but there was no significant difference between the two tumor groups. Up-regulation of the hypoxia-induced signaling is seen in both TN-ACC and grade-matched TNBC. Despite its perceived low malignant potential, TN-ACC of the breast does not differ in the number of blood and lymphatic vessels in comparison with the grade-matched TNBC. The reported biologic differences between TN-ACC and TNBC do not appear to result from neoangiogenesis.

Vranić S, Gurjeva O, Frković-Grazio S, Palazzo J, Tawfik O, Gatalica Z. IMP3, a proposed novel basal phenotype marker, is commonly overexpressed in adenoid cystic carcinomas but not in apocrine carcinomas of the breast. Appl Immunohistochem Mol Morphol. 2011 Oct;19(5):413-6.

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Insulin-like growth factor-II mRNA-binding protein 3 (IMP3) is a member of the insulin-like growth factor-II signaling pathway, and has recently been described as a biomarker of basal-like breast carcinomas. This study explored IMP3 expression in adenoid cystic carcinomas of the breast, a special type of basal-like, triple-negative (estrogen receptor/progesterone receptor/human epidermal growth factor receptor 2/neu protein negative) carcinoma and compared it with a group of apocrine carcinomas, which are an example of estrogen receptor/progesterone receptor negative, special type of breast carcinoma. Eighteen breast adenoid cystic carcinomas (16 primary and 2 corresponding metastases) and 18 apocrine carcinomas (16 invasive and 2 in situ) were evaluated for the expression of IMP3 protein using immunohistochemical method. A cut-off value for IMP3 positivity was set at 10%. Thirteen of 16 (81.3%) primary adenoid cystic carcinomas overexpressed IMP3 protein, predominantly in membranous distribution. The mean percentage of positive cells among primary adenoid cystic carcinomas was 50%. Both metastatic adenoid cystic carcinomas also strongly overexpressed IMP3 protein (70% and 80% of the tumor cells, respectively). In contrast, only 4 of 16 invasive apocrine carcinomas (25%) exhibited IMP3 positivity with significantly lower percentage of positive cells (27%, $P < 0.001$). Two in-situ apocrine carcinomas were negative. Our results indicate that IMP3 may be an additional basal-type marker in breast carcinoma

whose expression can be occasionally seen in other types of breast carcinomas such as apocrine type.

Zerem E, Imamović G, Pašić F. Comment on the article about safety of blind percutaneous liver biopsy in obese children. J Clin Gastroenterol. 2011 Aug;45(7):651.

University Clinical Center Tuzla, Tuzla, Bosnia and Herzegovina.

No abstract available.

Zerem E, Pavlović-Čalić N, Sušić A, Haračić B. Percutaneous management of pancreatic abscesses: long term results in a single center. Eur J Intern Med. 2011 Oct;22(5):e50-4. Epub 2011 Feb 26.

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BACKGROUND: Several authors consider that surgical intervention is the gold standard for treatment of pancreatic abscesses. Recently, considerable interest has been generated in the minimally invasive management of pancreatic abscess with mixed results reported in the literature. **AIM:** To evaluate the efficacy of percutaneous aspiration and/or drainage for patients with pancreatic abscesses. **METHODS:** We performed a retrospective analysis of 62 patients with 87 pancreatic abscesses treated by percutaneous management from 1989 to 2009. All patients received appropriate antibiotic therapy. Patients with pancreatic abscess < 50 mm in diameter were initially treated by ultrasound-guided percutaneous needle aspiration (PNA) and those with abscess ≥ 50 mm were initially treated by ultrasound-guided percutaneous catheter drainage (PCD). Surgery was planned only when there was no clinical improvement after the initial percutaneous treatment. Primary outcome was conversion rate to surgery. **RESULTS:** Two patients (3.2%) received supportive treatment only and one of them died. PNA was performed in 16 patients (25.8%), and 8 of them required PCD because of recurrence of abscess. In 44 patients (70.1%), PCD was performed initially. PCD was performed twice in 6 patients and 3 times in 2 patients. There were 5 patients converted to surgery (8.1%) and one of them died. Medians (interquartile ranges) of hospital stay and catheter dwell-time were 17 (12-26) and 12 (9-21) days, respectively. There were no complications related to the procedure. **CONCLUSIONS:** Percutaneous aspiration and/or drainage are effective and safe for the treatment of pancreatic abscesses.

by Nerma Tanović