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BACKGROUND The effects of focal hypertrophy on geometry of the left ventricle and systolic function have not been studied in patients with hypertrophic cardiomyopathy (HCM), despite the fact that the former is the most prominent disease characteristic. The aim of our study was to analyze systolic function over ventricle geometry, generating a functional index made from left ventricle end diastolic dimension (LVEDD) divided by end diastolic thickness of the region with maximal extent of hypertrophy and interventricular septum. MATERIAL AND METHODS Our hospital database of cardiac magnetic resonance was screened for HCM. Geometric functional index (GFI) was calculated for LVEDD over maximal end diastolic thickness (MaxEDT) giving GFI-M, while LVEDD over interventricular septum was expressed as GFI-I. There were 55 consecutive patients with HCM. RESULTS There were 43 males (78.2%) and 12 females (21.8%). The mean age was 52.3±16.7 years (range: 15.5-76.4 years). A significant difference of GFI was found for preserved versus impaired systolic function of the left ventricle (preserved systolic function): GFI-M 2.28±0.60 versus 3.66±0.50 (p<0.001), and GFI-I 2.75±0.88 versus 3.81±0.87 (p<0.001), respectively. Diagnostic value was tested using receiver operating curve (ROC) analyzes, with GFI-M area under curve (AUC)=0.959 (95% CI: 0.868-0.994), (p<0.001) and GFI-I-AUC=0.847 (0.724-0.930), (p<0.001). GFI-M was superior to GFI-I for appraisal of left ventricle systolic dysfunction in HCM; ΔAUC=0.112 (0.018-0.207), (p=0.020). CONCLUSIONS GFI is a simple tool, with high sensitivity and specificity for detecting impairment of systolic function in patients with HCM. Further studies would be necessary to investigate its clinical and prognostic impacts, as well as reproducibility with prospective validation.

Božek T1, Bilić-Ćurcić I1, Berković MC1, Gradišer M2, Kurir TT1, Majanović SK3, Marušić S4. The effectiveness of lixisenatide as an add on therapy to basal insulin in diabetic type 2 patients previously treated with different insulin regimes: a multi-center observational study. Diabetol Metab Syndr. 2018;10:16.

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INTRODUCTION: This observational study aimed to assess the effectiveness of lixisenatide as add on therapy to basal insulin in diabetic type 2 patients previously treated with different insulin regimes. METHODS: Patients with diabetes type 2, prescribed with lixisenatide and basal insulin were divided in three groups (premixed insulin, basal bolus insulin and basal oral therapy (BOT)). Difference in mean change in HbA1c, body mass index, total.
insulin doses, fasting blood glucose (FPG) and prandial blood glucose (PPG) were assessed after 3-6-months of follow-up. RESULTS: The primary outcomes were assessed in 111 patients. Lixisenatide added to basal insulin, reduced HbA1c and body weight significantly in all three groups of patients (p < 0.001 for all), with the most prominent reduction in the basal bolus group of patients which had the highest baseline HbA1c compared to premix and BOT treatment groups. Regarding a difference in total insulin dose the reduction was statistically significant in the basal bolus (p = 0.006) and premix group (p < 0.001). FPG and PPG were also significantly reduced over time in all three groups (p < 0.001 for all). A composite outcome (reduction of HbA1c below 7% (53 mmol/mol) with any weight loss) was achieved in 27% of total patients included in the study, reduction of HbA1c below 7% was observed in 30% of patients, while 90% of patients experienced weight reduction. CONCLUSION: These results indicate that lixisenatide add on basal insulin treatment (BIT) can improve glycemic control in a population with long-standing type 2 diabetes and previously uncontrolled on other insulin therapy.


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BACKGROUND: Some studies have demonstrated that higher baseline plasma levels of 25-hydroxivitamin D [25(OH)D] are associated with a significant reduction in colorectal cancer (CRC) incidence. Patients with metastatic CRC (mCRC) tend to be vitamin D insufficient, but the effect of vitamin D on the survival of mCRC patients still remains uncertain. In this study, we evaluated the association between cholecalciferol 2,000 IU daily supplementation and survival of mCRC patients. METHODS: Seventy-two patients with mCRC were included. Seventy-one patients with 25(OH)D levels <75 nmol/l were randomized to receive standard chemotherapy or standard chemotherapy with cholecalciferol 2,000 IU daily. The primary endpoint was overall survival (OS) and the secondary endpoint was progression-free survival (PFS). The follow-up period was 46 mo. RESULTS: All but one patient (98.6%) was vitamin D insufficient. There was no statistically significant difference in OS or PFS between those who received vitamin D supplements and controls. CONCLUSIONS: The majority of patients with mCRC are vitamin D insufficient at the time of diagnosis. In our study, adding 2,000 IU of cholecalciferol daily for 2 yr to standard chemotherapy did not show any benefit in OS or PFS.

Vucak J1, Turudic D2, Milosevic D3, Bilic M4, Salek Z5, Rincic M4, Bilic E3, Genotype-phenotype correlation of β-thalassemia in Croatian patients: A specific HBB gene

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An analysis of genotype-phenotype correlation was performed for 14 patients with beta-thalassemia who had been registered in Referral Centre for hematology and oncology of the University Hospital Centre, Zagreb, Croatia. HBB gene mutations were determined using a gene-specific Q5 High-Fidelity PCR analysis with direct DNA sequencing of amplified transcripts. Mahidol score index used for classification of thalassemia severity was found to be low for all the patients enrolled in the study, indicating a mild β-thalassemia phenotype with no signs of disease progression. Most of the patients have already described gene mutations: IVS-II-666 C>T (HBB:c.316-185C>T) and IVS-II-16 G>C (HBB:c.315+16G>C). Each of the aforementioned mutations was found in (11/14; 78.57%) and (10/14; 71.43%) of our patients, respectively. Recently published HBB:c.9T>C mutation was found in 8 of 14 (57.14%) in our study group. IVSII-74 T>G (HBB:c.315+74T>G) is a worldwide mutation found in 6 of 14 (42.86%) of our patients. All these mutations occur among Croatian children with no obvious Indian/Near Eastern/Iranian ancestry. We also identified 7 de novo mutations (c.316-135het_dupT, c.316-133A>G, c.316-54G>A, c.316-68_316-67het_insCGG, c.316-342delA, c.316-312delT, c.316-209delT) of mild severity phenotype according to Mahidol classification score index. We did not find children or adults with thalassemia major severity phenotype.


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OBJECTIVES To investigate possible associations between 25-hydroxyvitamin D3 (25(OH)D3), oestradiol (E2) and IFN-gamma (IFNγ) in female patients with inactive systemic lupus erythematosus (SLE). METHODS Female patients with inactive SLE and age-matched healthy controls were recruited into this cross-sectional study. Serum concentrations of 25(OH)D3, E2 and IFNγ were measured by radioimmunoassay with gamma-counters and enzyme-linked immunosorbent assay. RESULTS 36 patients and 37 controls were enrolled. In patients with SLE, the concentration of 25(OH)D3 was lower and E2 was higher compared with controls. In vitamin D deficient (i.e., 25(OH)D3<20ng/ml) patients, IFNγ was 150% higher compared with patients with 25(OH)D3>20ng/ml and controls. The concentration of E2 was higher in all patients compared with controls independently of the vitamin D level. A difference was found between patients and controls in the correlation of 25(OH)D3 with E2 and a positive correlation was found between E2 and IFNγ in all participants. CONCLUSIONS Our results suggest that E2 may have a strong modulating effect on vitamin D function which is significant only at low concentration of E2.


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AIM: CDK4/6 inhibitors in the first and second treatment line in patients with HR+/HER2- metastatic breast cancer (mBC) in combination with hormonal therapy improve progression-free survival. Role of CDK4/6 inhibitors in further treatment lines remains unclear. METHODS: Retrospective analysis of 24 HR+/HER2- heavily pretreated mBC patients is presented. RESULTS: A total of 58.3% patients achieved stable disease. No objective response was observed. Median progression-free survival was 4.8 months; median overall survival was 11 months. Treatment was well tolerated. CONCLUSION: Favorable toxicity profile and efficacy of palbociclib/aromatase inhibitors combination in heavily pretreated luminal mBC patients in this study emphasize the need for further investigation of such drugs in this population.
Croat Med J. 2018;59(93-6).


**AIM**: To determine the prognostic significance of low serum C3 at the time of diagnosis of ANCA-associated vasculitis (AAV). **METHODS**: Our cohort included 75 consecutive patients with AAV diagnosed from January 2005 to December 2015. C3 levels were measured at the time of diagnosis. Patients were divided into two groups, those with low serum C3 levels (<0.9 g/l) and those with normal serum C3 levels (0.9-1.8 g/l). We analyzed association between serum C3 levels and both combined and singularly patient and renal survival (ESRD). Small number of relapsed patients did not allow for the statistical analysis to be performed as to whether the low serum C3 is associated with relapse rate in AAV patients. **RESULTS**: Low serum C3 levels were significantly associated with worse combined end-point patient and renal survival (HR 3.079; 95% CI 1.231-7.701; p = 0.016), and on multivariate adjusted analysis association remained significant (HR 2.831; 95% CI 1.093-7.338; p = 0.032). For both end-points individually low serum C3 levels were significantly associated with poorer patient survival (HR 6.378; 95% CI 2.252-18.065; p < 0.001; on multivariate adjusted analysis HR 4.315 95% CI 1.350-13.799; p = 0.014) and renal survival (HR 3.207; 95% CI 1.040-9.830; p = 0.043; on multivariate adjusted analysis HR 3.679, 95% CI 1.144-11.827; p = 0.029). In our study there was no significant association between serological and pathohistological phenotypes and serum C3 levels. **CONCLUSION**: Lower serum C3 levels at the diagnosis is associated with poorer patient and renal outcomes in AAV patients.