cells stably expressing VDR-shRNA and VDR-adv and control K1 cells were injected subcutaneously into SCID mice.The tumor was isolated and weighed, and the expression of proliferation and differentiation of the tumor was detected by IHC.

Results: We found that VDR was upregulated in DTC tissues compared to the adjacent non-cancerous tissue ($P<0.05$). Overexpression of VDR increased the abundance of membrane E-cadherin protein and E-cadherin/β-catenin adhesion complex and differentiation, decreased proliferation in DTC cells in vitro ($P<0.05$), as well as DTC cell derived xenografts in vivo. In contrast, knockdown of VDR had an opposite effect. Knockdown of E-cadherin abolished VDR-induced suppression of proliferation and enhancement of differentiation of the DTC cells. Knockdown of β-catenin partially reversed the effect of the VDR knockdown.

Conclusion(s): Taken together, VDR inhibits DTC cell proliferation and promotes differentiation via regulation of the E-cadherin/β-catenin complex.

doi:10.1016/j.bonr.2021.100924

P073

Complex therapy of a patient with type 2 diabetes mellitus (t2dm) and morbide obesity in rehabilitation

Valeriia Vasileva, Larisa Marchenkova
National Medical Research Center of Rehabilitation and Balneology, National Medical Research Center of Rehabilitation and Balneology, Moscow, Russia C.I.S.

Background/Introduction: Treatment of morbid obesity in patients with type 2 diabetes is difficult.

Purpose: The patient T., 43 y.o. addressed with the diagnosis: T2DM (purpose HbA1c <6.5%). Morbid obesity.

Methods: The patient underwent an outpatient rehabilitation program: low-calorie diet, gymnastics in the pool #15, general magnetotherapy # 10, physical therapy in a gym # 15, exercises bike in a gym # 15.

Results: Height 165 cm, body weight (BW) 152 kg, BMI 55.8 kg / m2, waist circumference (WC) 139 cm, hips (HC) 143 cm.HbA1c level of 7.9%, fasting glucose 9.7 mmol /L, total cholesterol (TH) 7.4 mmol / L, triglycerides (TG) 3.08 mmol / L,LDL 4, 8 mmol / L, HDL 1.2 mmol / L, leptin 92.14 ng / ml, 25 (OH) D3 14.6 ng / ml. Bioimpedansometry: fat mass (FM) 81.6 kg, lean mass (LM) 69.4 kg, musculoskeletal mass (SMM) 30.1 kg. Data after completion of the course of treatment: BW 145 kg, BMI 53.3 kg / m2, WC 132 cm, HC 140 cm, BP 128/88 mm Hg, glucose 5.3 mmol / L, TH 6.9 mmol / L, TG 3.03 mmol / L, LDL 4.4 mmol / L, HDL 1.22 mmol / L in serum. Bioimpedansometry: FM 73.4 kg, LM 70.6 kg, SMM 31.8 kg.After 3 months: BW 139 kg, BMI 51.1 kg / m2, WC 128 cm, HC 132 cm, Glucose 5.1 mmol / L, TH 5.9 mmol / L, TG 3.01 mmol / L, LDL 3.52 mmol / L, HDL 1.36 mmol / L, Leptin 36.7 ng / ml, 25 (OH) D3 31.1 ng / ml in serum. Bioimpedansometry: FM 69.3 kg, LM 68.7 kg, SMM 31.0 kg.

Conclusion(s): The clinical case demonstrates the possibilities of complex treatment using non-drug methods and pharmacotherapy for T2DM in combination with morbid obesity.

doi:10.1016/j.bonr.2021.100925

P074

Experience of complex rehabilitation of comorbid patient with acute myocardial infarction (AIM) against background of type 2 diabetes mellitus (DM2) and obesity

Valeriia Vasileva, Larisa Marchenkova, Valeriy Sergeev
National Medical Research Center of Rehabilitation and Balneology, Moscow, Russia C.I.S.

Background/Introduction: Rehabilitation of patients after AIM against the background of DM2 with obesity presents difficulties and requires a personalized approach.

Purpose: Presentation of the clinical case is a description of the experience of complex rehabilitation of the patient in the early period of AIM against the background of DM2 in combination with morbid obesity using modern methods of physical therapy and liraglutide therapy.

Methods: *Rehabilitation program:* low-calorie diet, low-intensity laser exposure (over-the-top laser on points) #10, physical exercises in a gym in cardio group # 10, exercises bike in a gym # 10, speleotherapy # 10. Given the transferred AIM, metformin has been cancelled. Liraglutide therapy was initiated at an initial dose of 0.6 mg/day, followed by an increase of 0.6 mg/day. Per week to a therapeutic dose of 1.8 mg/day. There are no undesirable phenomena. Discharged 12 days later to continue his outpatient rehabilitation.

Results: The patient Z., female, 53 y.o.:Coronary heart disease: AIM of the lower wall of the left ventricle with growth of ST. Condition after stenting of the right coronary artery from 21.10.2020.DM2 (HbA1c purpose <7.0%). Obesity. Height 165 cm, body weight (BW) 152 kg, BMI 55.8 kg/m2, waist circumference (WC) 139 cm, hips circumference (HC) 143 cm, blood pressure (BP) 148/98 mm Hg. HbA1c 7.6%, glucose 9.1 mmol/l, total cholesterol (TC) 7.4 mmol/l, triglycerides (TH) 3.08 mmol/l, LDL 4.8 mmol/l, LHL 1.2 mmol/l.

Condition in 30 days: satisfactory, dyshnea decreased, tolerance to physical loads increased. BW 145 kg, BMI 53.3 kg/m2, WC 132 cm, HW 140 cm, BP 124/79 mm Hg. Glucose 5.3 mmol/L, TH 6.9 mmol/L, TG 3.03 mmol/L, LDL 4.4 mmol/L, LDL 1.22 mmol/L in serum.

Conclusion(s): clinical case demonstrates the possibilities of complex rehabilitation of the patient with AIM against the background of DM2 in combination with morbid obesity using physical therapy methods and the use of laraglutide.

doi:10.1016/j.bonr.2021.100926

P075

Therapeutic potential of astilbin on diabetes and related secondary complication 'diabetic nephropathy': Therapeutic potential and scientific data analysis of current research work

Dinesh Kumar Patel
Sam Higginbottom University of Agriculture- Technology and Sciences, Faculty of Health Sciences, Prayagraj, India

Background/Introduction: Astilbin is a natural flavonoid compound found to be present in the S. aristolochiifolia, Engelhardtia chrysolepis and Smilax glabra. Astilbin have been well known for their anti-inflammatory activity. Diabetic nephropathy is one of the major complication of all the diabetes patients and responsible for end-stage renal disorders of Human being.

Purpose: Astilbin have been known for their inhibitory potential against carbohydrates-hydrolyzing enzymes which is one of the factors of hyperglycemic condition in the Human being.

Methods: In order to know the effectiveness of astilbin for the treatment of diabetes and related secondary complication, here in the present investigation data analysis of various scientific research works have been performed. However effect of astilbin on α-amylase and yeast α-glucosidase has been also performed through data analysis of scientific work to know their therapeutic potential against diabetes and related complication. All the scientific data have been also correlated with pharmacological activities of astilbin to get better results.