Asia Pacific Conference on

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Quality of life in patients with metabolically healthy obesity before and after weight loss

Tatiana Romantsova, Ostrovskaya E, Gerasimov A and Novoselova T
I.M. Sechenov First Moscow State Medical University, Russia

Obesity has a negative impact on the quality of life indicators; weight loss has a distinct positive effect on these parameters. The purpose of the study was to analyze Quality Of Life (QoL) indicators in patients with Metabolically Healthy Obesity (MHO) associated with ≥5% weight loss. The study involved 44 females with MHO (according to the IDF criteria of the Metabolic Syndrome (MS), 2005) and 33 females with Metabolically Unhealthy Obesity (MUHO) aged 19-59 years. To assess QoL, we used the SF-36 questionnaire (Medical Outcomes Study-Short Form 36). Initially QoL indicators in both groups were not significantly different statistically. The physical component of health (PHsum) in the MHO and MUHO groups averaged 53.9±6.7 and 50.6±6.3 points (p=0.032). The mental component of health (MHsum) averaged 42.1±1.8 and 45.1±1.8 points (p=0.255). The ≥5% decrease in body weight (from the initial body weight) after 6 months led to an increase in the indicators of physical role functioning by 11.6%, vitality by 12.8%, social functioning by 11.2%, emotional role functioning by 11.9%, mental health by 8.8% ($p<0.05$) in the MHO group, while in the MUHO group the indicators of physical role functioning increased by 24.6%, emotional role functioning by 39.5% and mental health by 9.2% ($p<0.05$). The MHO group is characterized by higher physical component of health, without a statistically significant difference in the indicators of each of the 8 scales of the SF-36 questionnaire. A ≥5% decrease in the body mass in patients of both groups is accompanied by the increase in the indicators of QoL.

Biography

Tatiana Romantsova is currently working as a Professor at Department of Endocrinology in Sechenov University, Moscow. He is the author of 215 scientific articles.

romantsovatatiana@rambler.ru

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Necrotizing fasciitis as a rare documented side effect of Docetaxel

Ricci Steven and Jeffry Beta Tenggara
MRCCC Siloam Hospitals, Indonesia

Introduction: Docetaxel was frequently used to treat solid tumors, primarily breast cancer by disrupting microtubule function to inhibit cell division. Although this agent was known to cause myalgia, arthralgia and neuropathy, there are few reports since 2005 that published the myositis complication of this agent. We presented a case report of necrotizing fasciitis as a continuing myositis condition that happened after Docetaxel treatment.

Case Report: A 44 years old female diagnosed with stage-IIIB ductal invasive breast carcinoma (ER/PR+ HER-). She underwent chemotherapy with Docetaxel and Doxorubicin following the surgical treatment. After 6th chemotherapy cycle, the patient had pain at both thighs especially the left side. The symptom progressed until blisters seen on the skin and ulcer developed. Physical examination showed normal vital signs, ulceration at posterior left thigh with minimal purulent discharge, stiff and tender on palpation. Laboratory result showed elevated CRP and ESR with no elevated WBC and shifting of differential count. Doppler ultrasound showed soft tissue edema with no sign of DVT or thrombus, contrast MRI showed thickening and edema of the thigh muscle, enhancement of adductor brevis, semitendinosus, gluteus maximus and lateral vastus muscle, which consistent with myositis necroticans. PET- CT revealed necrotic irregular pattern on subcutaneous tissue including muscles at both posterior thigh compartment, with left domination. The result was different than previous PET- CT study which conducted before administration of Docetaxel. She was suspected with myositis complicated with secondary infection and planned to undergone surgical debridement. At intraoperative procedure, the surgeon found necrotic muscular tissue with no sign of primary infection. The tissues were sent for pathology examination. Pathology examination revealed necrotic tissues with gas inclusion, inflammatory cells (PMN and lymphocyte) and necrotic vascular tissues, these findings consistent with necrotizing fasciitis. In 1990s, reports of Docetaxel side effect began to revealed myopathy condition with unexplained pathophysiology. Documented cases of acute inflammatory myositis in patients treated with Docetaxel began to publish since 2005. Until 2015 there are less than 10 cases reported the myositis side effect of Docetaxel. The proposed theory linking this effect were direct myotoxicity, systemic leakage of protein in the interstitial space, increased cytokine levels (primarily IL-6, IL-8, IL-10), indirect muscle damage through hypocalcaemia and hyperthermia and accumulation of acid phosphatase in muscle lysosome. Although Docetaxel induced myositis was an exclusion diagnosis, this rare side effect must be considered to prevent further deteriorating condition.

Discussion: Myositis and necrotizing fasciitis is a rare side effect of Docetaxel that only few of reports documented since 2005. There are several proposed mechanisms linking this condition. Consideration and early recognition of this condition were needed to prevent further deterioration.

Biography

Ricci Steven obtained his medical degree at Atma Jaya University in 2014. After graduated he continued his internship program at Wolter Monginsidi Hospital, North Sulawesi, and further work as a medical doctor at Elisabeth Lela Hospital, East Nusa Tenggara, Indonesia. He currently works in MRCCC Siloam Hospital Jakarta, a cancer hospital, as a resident medical officer in hospital ward. He assisted medical oncologist in treating oncology patients. In addition to his medical practice, he is a member of Indonesian Medical Association.

ricci.stv@gmail.com

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Mean amplitude of glycemic excursions of first trimester of pregnancy in gestational diabetes and non-gestational diabetes mellitus patients

Nurul Syaza Razali[1], Tan Kok Hian[1] and Cherylin Tan[2]

[1]KK Women's and Children's Hospital, Singapore

[2]Duke-NUS Medical School, Singapore

Introduction: Diabetes is characterized by glycemic disorders such as sustained chronic hyperglycemia and acute glucose fluctuations. Maternal hyperglycemia and glycemic variability in Gestational Diabetes Mellitus (GDM) is associated with increased risks of adverse pregnancy outcomes. Glycemic variability leads to oxidative stress and potentially contributes to micro and macrovascular complications. It is beneficial to study the glucose variability in GDM patients for prevention of complications. Glucose variability can be studied by the Mean Amplitude of Glycemic Excursions (MAGE) which can be acquired from the use of Continuous Glucose Monitoring (CGM).

Method: An observational study (I-Profile) using CGM was conducted in KK Hospital, Singapore on women seeking antenatal care. Eighteen subjects were provided CGM devices during their first trimester of pregnancy (9-13 weeks gestational age). Subjects were classified as GDM (n=3) or non-GDM (n=15) cases after their oral glucose tolerance test according to the IADPSG criteria. The data from the CGM was used to calculate MAGE. MAGE was then compared during the fasting and non-fasting period of the day. Fasting is defined as the period of eight hours without food. The range of 10 pm to 6 am was considered to be fasting period and 6am-10pm to be non-fasting period.

Results: The fasting MAGE of non-GDM patients was 1.45 (SD±0.55), while GDM patients had an increased fasting MAGE of 3.3 (SD±0.92) (p=<0.001), showing significance in glycemic variability of patients with GDM. The non-fasting MAGE for non-GDM patients is 2.15 (SD±0.71) and GDM patients is 4.22(SD±1.33) (p=0.151). The overall MAGE was found to be 2.15 (SD±0.71) in non-GDM patients and 4.27 (±1.22) in GDM patients (p=0.001).

Conclusion: The glycemic variability (MAGE) during fasting at first trimester was significantly higher in patients that were eventually diagnosed with GDM. However, the MAGE readings between the GDM and non-GDM groups at non-fasting hours were statistically insignificant.

Biography

Nurul Syaza Razali is a part of the Integrated Platform for Research in Advancing Metabolic Health Outcomes of Women and Children (IPRAMHO) study group in Singapore.

nurul.syaza@kkh.com.sg

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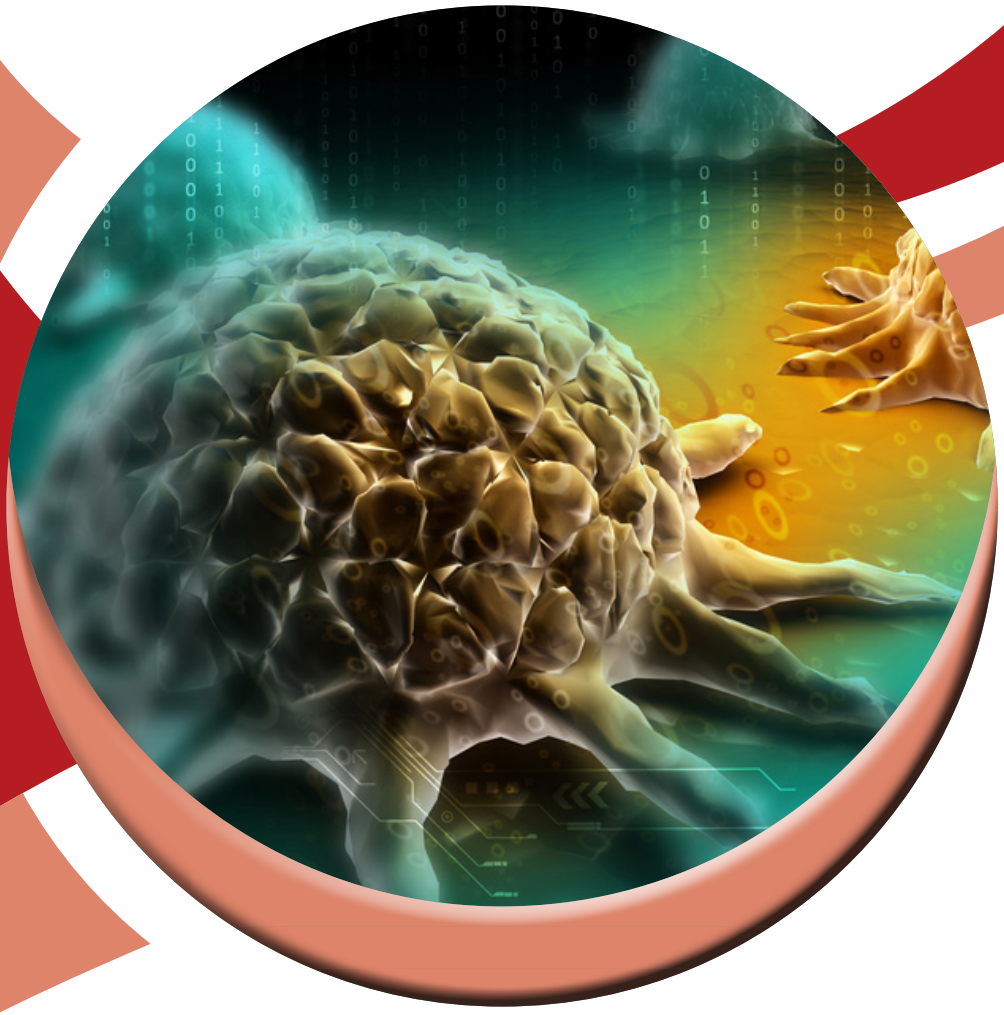

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Mulinum crassifolium Phil; two new mulinanes, gastroprotective fibromyalgia activity and metabolomic analysis by UHPLC-orbitrap mass spectrometry

Teresa Cano de Terrones[2], Carlos Areche[1], Ronald Fernandez-Burgos[1,2,] Mario Simirgiotis[3], Olimpo García-Beltrán[4], Jorge Borquez[5] and Beatriz Sepulveda[6]

[1]*University of Chile, Chile*

[2]*National University of San Agustín, Peru*

[3]*Universidad Austral de Chile, Valdivia*

[4]*University of Ibagué, Carrera*

[5]*University of Antofagasta, Chile*

[6]*Universidad Andrés Bello, Chile*

Mulinum crassifolium Phil. (Apiaceae) is an endemic shrub from Chile commonly used as infusion in traditional medicine to treat diabetes, bronchial and intestinal disorders and stomach ailments, including ulcers. From the EtOAc extract of this plant, the new mulinane-type diterpenoids 3 and 5 were isolated along with three known diterpenoids. The gastroprotective effect of the infusion of the plant was assayed to support the traditional use and a fast HPLC analysis using high resolution techniques was performed to identify the bioactive constituents. The EtOAc extract and the edible infusion showed gastroprotective effect at 100 mg/kg in the HCl/EtOH induced gastric ulcer model in mice, reducing lesions by 33% and 74%, respectively. Finally, a metabolomic profiling based on UHPLC-ESI-MS/HRMS of the edible infusion was performed and thirty-five compounds were tentatively identified including quercetin, ca eic acid, apigenine glucoside, p-coumaric acid, chlorogenic acids, and ca eoylquinic acids, which have been associated previously with gastroprotective and antiulcer properties. This scientific evidence can support the contribution of polyphenols in the gastroprotective activity of the edible infusion of this plant, and can validate at least in part, its Ethnopharmacological use.

Biography

Teresa Cano de Terrones has her experience in evaluation and passion to improve health and wellness research as a teacher and researcher. Its evaluation and research model is open and contextual based on receptive constructivists who create new ways to improve medical c are. She has built this model after years of experience in research, evaluation, teaching and administration. Its methodology is based on the evaluation of different plant species, which is techniques used by previous generations of evaluation: measurement, description and judgment. It allows the pluralism of values. This approach responds to all interested parties and has a different way of focusing. Advice in masters and doctorate in the areas: molecular biology, chemistry of natural products, and its application in the field of medicine, bioremediation, and nanoparticles obtained from plant extracts with sales of noble metals.

tcanefa@gmail.com

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Medical nutrition therapy in diabetes management: A healthcare professional centric survey

Ashok Kumar Das[1], Chetan Mehndiratta[6], Sanjay Kalra[2], Atul Dhingra[3], Mangesh Tiwaskar[4], Supratik Bhattacharyya[5]and Tanmay Agrawal[6]

[1]*Pondicherry Institute of Medical Sciences, India*
[2]*Bharti Hospital- Karnal, India*
[3]*Gangaram Bansal Hospital, India*
[4]*Shilpa Medical Research Centre, India*
[5]*Apollo Clinic- Kolkata, India*
[6]*Signutra, India*

Introduction: Approximately 425 million people were living with diabetes in 2017 and by 2045; it is expected to increase to 629 million. A healthy lifestyle, including a nutritious balanced diet is a key component of diabetes management. Medical Nutrition Th erapy (MNT) is defi ned as "nutritional diagnostic, therapy and counseling services" for the purpose of disease management, which are furnished, by a registered dietitian or nutrition professional. Incorporating MNT into diabetes-specifi c nutritional management has shown to improve glycemic profi les and to reduce the risk of disease complications.

Method: Keeping in view the direct correlation between diet and diabetes management, we undertook a survey on the MNT in diabetes management in adults across India. A total of 380 Diabetologist/Endocrinologist/Consulting Physician/Gynecologist completed the 15-item survey by rating on a 5 point Likert scale, where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree. Th e questionnaire is about identifying the complete requirement of diabetic population, impact of 3Ds: Diet, daily lifestyle modifi cation and drug therapy, preference as formula feed or home-cooked food, recommendation pattern, benefi ts of MNT, the importance and awareness of low glycemic index and glycemic load, indications of MNT and practice trends of doctors across India.

Result: More than 91% of doctors agreed or strongly agreed that complete management of diabetes requires 3D's: Diet, Daily lifestyle modifi cation and Drug therapy. A total of 89.4% doctors were of opinion that MNT is important in preventing diabetes, managing existing diabetes, and preventing or slowing complications, however they believe that MNT should be individualized based on the requirement. Th e most common indication for MNT was glycemic control and the most common pattern of prescription was either as snack supplement or snack replacement.

Conclusion: Doctors strongly recommend the need of MNT in complete management of diabetes under the guidance from a registered dietician.

chetan2882@gmail.com

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In vitro hepatocellular carcinoma evaluation of different extracts of medicinal plants

Majed Bawazeer[1], Bathini Thissera[1], Mallique Qader[1,2],Ayman Banah[3], Mostafa E. Rateb[1], Mohammed Yaseen[1]*

University of the West of Scotland, United Kingdom

Cancer is a leading cause of death worldwide. According to WHO reports, more than 8.8 million deaths were recorded in 2015. Resistance on chemotherapeutic drugs has threaten the achievements of modern medicine. The extracts of the plant sources are rich in phytochemicals and they are proven to have promising bioactivities. Therefore, searching for new natural inhibitors is felt to be paramount to find broader range and novel products for the treatment of cancers with minimal side effects. In the current study, *Ziziphus spina-christi* (leaves), *Ziziphus spina-christi* (leaves), *Asafoetida* (resin), *Ajwa Medina* (seeds), *Liquorice Root Powder* (roots) *chamomile flower* (leaves), *Bulk Herbs Thyme* (leaves) and *marigold flowers calendula* (leaves) were collected from Saudi Arabia and United Kingdom in 2017. The dried plant samples were macerated and extracted using methanol. The resulting crude extracts were tested for their anti-proliferative activity against Hep G2 (hepatocellular carcinoma) cancer cell line using MTT assay. The total crude extracts of all the tested samples showed more than 70% cytotoxic activity while, *Asafoetida crude* showed 98%, cytotoxic activity at 50 g/mL concentration. To identify the phytochemicals present in the active extracts of these plants, chemical profiling using GCMS and LC-HRESIMS are underway.

Majed90765@hotmail.com

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A better targeted drug therapy

Fatemeh Babaie
Semnan University of Cellular and Molecular Biology, Iran

Antibody drug conjugates(ADCs) currently have substantial limitations. Because they can have unpredictable effects and may be unstable, losing their payloads and producing toxicity. So we set out to design more stable and predictable ADCs by using computer simulations to predict and plan out how the drug payload and antibody can stay linked to each other. We designed a LEGOlike linker that just clicks a drug payload to any antibody we want. That means we can deliver a drug specifically to any tissue that expresses the target of the antibody. Also we used computational docking molecular simulations to create prototype that could link an antibody and drug payload and mapped the binding sites to determine how liganddrug pairs would bind to different antibodies. We synthesized the various components and showed that when they were incubated together, they could self-assemble into ADCs, like magnets that find one another. Inspired by this observation, we named this approach MAGNET ADCs, which stands for multivalent and affinity-guided antibody empowerment technology. The MAGNET ADCs could be generated rapidly and did not require modifying antibodies and it showed long-term stability in plasma, lasting 14 days and showing low toxicity. This technology could be adapted to a variety of therapeutic or diagnostic uses. We tested MAGNET ADCs in a model for human lung cancer and envisage that the MAGNET-ADC approach can be extended to a wide range of therapeutic molecules as well as to diagnostics, with potential uses beyond the treatment of cancer.

Biography

Student of cellular and molecular biology, Medical researcher, International degree in genetic engineering, Participated in the 3rd international neuroinflammation congress and the 3rd international student festival of neuroscience organized by neuroscience department, mashhad university of medical science, Participated in the 3rd international biotechnology congress of Islamic republic of Iran, Participated in the 3rd international congress on biomedicine2019, Participated in the 8th International Conference on Women's Health, Tehran, Iran

mahijk1997@yahoo.com

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The Effect of Isopropyl Nitrite on Hemoglobin Induced Oxidation in Diabetics Blood

John Philip Tarburton
National University, USA

The effect of isopropyl nitrite on human Type 2 diabetics blood was undertaken using nondiabetics blood as the control group. The differences in patient characteristics such as the mean ages and weights of the two groups were not statistically significant (P>0.05), and the ratios of non-smokers to smokers were similar meaning that the two groups were well matched. These studies revealed that diabetics erythrocytes with a mean HbA1C value ± SEM of 11.4 ± 0.27% were oxidized at a significantly greater rate than the control blood (P<0.05). The isopropyl nitrite mean oxidation time ± SEM of diabetics blood was 1.5 ± 0.05 min (n = 20). For the nondiabetics blood a mean HbA1C ± SEM value of 5.5 ± 0.08% was obtained with a mean oxidation time ± SEM of the non-diabetics blood of 4.6 ± 0.13 min (n=20). These studies demonstrate that diabetics blood has an enhanced susceptibility of oxidation into methemoglobin by isopropyl nitrite compared to its respective control group ,i.e., the normal blood. This finding could be attributed to the fact that isopropyl nitrite is a nitrite ester which contains a saturated three hydrocarbon chain similar to other analogous nitrite esters (ethyl nitrite, butyl nitrite, pentyl nitrite and hexyl nitrite) which also contain saturated hydrocarbon chains that previously showed a statistically significant increased oxidation time for diabetics blood (P<0.05) (1-6). Thus this study confirms that the difference in the number of methylene molecules has no impact on the rate of oxidation on either diabetics blood or nondiabetics blood (P>0.05). These findings also imply that the increased susceptibility to isopropyl nitrite induced oxidation reaction in diabetics blood is a direct function of the amount of HbA1C present in the blood, i.e., a clear inverse relation appears to exist between the amount of HbA1C present and the oxidation time.

Biography

John Philip Tarburton has completed his Ph.D at the age of 25 years from the University of Nebraska and also did postdoctoral studies at the University of Nebraska. Dr. Tarburton is an Associate Professor at National University, the second-largest private nonprofit institution of higher learning in California and the twelfth largest in the United States. Dr. Tarburton has published more than 55 papers and abstracts in reputed journals and a book chapter about his research findings.

jtarburton@nu.edu

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