GLOBAL REGENERATIVE CONGRESS 2021

19–21 NOVEMBER 2021

DUBAI, UNITED ARAB EMIRATES

ORGANISED BY THE GLOBAL REGENERATIVE ACADEMY, INDEPENDENT SUBSIDIARY OF GLOBAL REGENERATIVE GROUP
Global Regenerative Congress Dubai 2021 the first and only Industry Independent Congress. Available for you to attend on-site in Dubai or online via virtual attendance. You can register to attend on-site in more than 8 scientific panels. Special guest panel will be the UAE experience in RegMed. Other will include – Basic Science in RegMed, Regenerative Orthopedics and Sport Medicine, Regenerative and Aesthetic Gynecology, Regenerative Neurology, Regenerative Urology, Plastic surgery, Regenerative Dermatology and Trichology.

Registrations are done through the website. You may register for only one or a couple of panels of your choice. Preferential price is offered for a full access ticket. CME credits are awarded for attending the scientific panel.

Over 50 speakers will present their work from 20+ countries in the world. This will be one of the largest medical events focused on Regenerative Medicine in the world.

ON-SITE TRAININGS will be the corner stone for you to see how regenerative procedures are done and learn from the best in the world. Certification with CME credits will also be awarded to those who finish the training. GRC Dubai trainings are in the field of Regenerative Gynecology and Regenerative Urology. See the website for more information and early registration.

Completely industry free and thus scientifically empowered!
1. ORGANIZING COMMITTEE AND SCIENTIFIC COMMITTEE

2. SCIENTIFIC AGENDA
   1. DAY 1 – 19.11.2021
   2. DAY 2 – 20.11.2021
   3. DAY 3 – 21.11.2021

3. ABSTRACTS
   1. BASIC SCIENCE IN REGENERATIVE MEDICINE
   2. REGENERATIVE ORTHOPAEDICS AND SPORTS MEDICINE
   3. REGENERATIVE DERMATOLOGY AND TRICHOLOGY
   4. REGENERATIVE AND AESTHETIC GYNECOLOGY AND ANTIAGING AND HORMONE THERAPY
   5. PLASTIC SURGERY AND REGENERATIVE MEDICINE
   6. NEUROLOGY AND PAIN MANAGEMENT
   7. REGENERATIVE UROLOGY
   8. UAE EXPERIENCE IN REGENERATIVE MEDICINE

4. VENUE CENTER

5. TRAVEL PARTNER

6. GRC 2022 – SEPTEMBER 2022, ISTANBUL, TURKEY
ORGANISING COMMITTEE

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2. Mariya Dimitrova
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1. Prof. Dr. Tahsin Beyzadeoglu
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5. Prof. Dr. Alan Ivkovic
6. Prof. Dr. Dusan Maric
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Cardiology

1. Dr. Miguel Garber

Neurosurgery

1. Dr. Himanshu Bansal
2. Prof. Dr. Mohammed Jumeily
3. Dr. Zbigniew Brodzinsky
DAY 1 GRC Dubai
Friday, 19 November, 2021
OPENS AT 12:00
Dubai – United Arab Emirates (GMT+4)

REGISTRATION
12:00 – 13:00

GRCONGRESS 2021 OPENING CEREMONY
13:00 – 13:10

BASIC SCIENCE IN REGENERATIVE MEDICINE
13:10 – 15:30

MODERATOR: Dr. Gehad El Bastiwasy

Presentation: 20 minutes

Dr. Behnam Sadeghi, MD, PhD – Decidua stromal cells (DSC) for the treatment of ARDS following Covid-19 infection, Case series study – virtual lecture – 13:10-13:30

Dr. Garber Miguel – Advance in heart regeneration. What’s new?” – virtual lecture – 13:30-13:50
Miomir Knezevic, PhD – MSCs and advanced therapies – promises and reality – virtual lecture – 13:50-14:10

Dr. Sairam Atluri – Can MSCs cure Covid-19? – virtual lecture – 14:10-14:30

Dr. Himanshu Bansal – Tips on PRP and stem cell application for clinics / in office – 14:30 – 14:50

Dr. Gehad ElBastawisy – Lymphocytes immunotherapy lit. Where we are now? – 14:50-15:10

QnA – 20 min. – 15:10 – 15:30

REGENERATIVE ORTHOPAEDICS. CARTILAGE REGENERATION. BONE REGENERATION

15:30 – 19:30

MODERATOR: Prof. Dr. Tahsin Beyzadeoglu/ Prof. Dr. Stefano Zanasi

Presentation: 20 minutes

Prof. Dr. Tahsin Beyzadeoglu – BMAC-PRF Application Combined with Microfracture for the Treatment of Symptomatic Cartilage Defects in the Knee – 15:30 – 15:50
Prof. Dr. Stefano Zanasi – Bipolar biological tissue bank osteochondral allograft perfused by combined ADSCS and BMSCS for biological replacement implant arthroplasty of the patella-femoral joint – 15:50 – 16:10

Prof. Dr. Murat Bozkurt – Current treatment strategies for cartilage repair – 16:10 – 16:30

Short QnA – 10 min. 16:30 – 16:40

Dr. Bartolomei Bobojc – Wharton Jelly’s MSCs for biological treatment of knee osteoarthritisrosis – is it an alternative instead of metal replacement? – 16:40-17:00

Dr. Alan Ivkovic – One-step autologous minced cartilage technique for the treatment of knee joint chondral defects – virtual lecture – 17:00-17:20

Prof. Dr. Reha Tandogan - The Role of Orthobiologics in the Treatment of Subchondral Bone Lesions of the Knee – virtual lecture – 17:20 – 17:40

Coffee – 10 min. – 17:40-17:50

Assoc. Prof. Dr. Wasim Khan – Optimising MSCs for clinical orthopaedic applications by comparing different tissue sources – virtual lecture – 17:50-18:10

Dr. Fabio Valerio Sciarretta – Use of Adipose-Derived Orthobiologics for cartilage defects repair – 18:10-18:30

Dr. Dimitrios Tsoukas – Adipose stem cells from knee liposuction for knee osteoarthritis – virtual lecture – 18:30-18:50

QnA – 20 min. – 19:10-19:30
DAY 2 GRC Dubai
Saturday, 20 November, 2021
OPENS AT 9:00
Dubai – United Arab Emirates (GMT+4)

REGENERATIVE ORTHOPAEDICS. CARTILAGE REGENERATION. BONE REGENERATION
09:00 – 13:00

MODERATOR: Prof. Dr. Murat Bozkurt/ Dr. G. Skarpas

Presentation: 20 minutes

Dr. Dzihan Abazovic – Regenerative medicine: the science behind it, clinical applications, and future directions – 09:00-09:20

Dr. Branko Vorkapic – Agents of regenerative medicine in rehabilitation of musculoskeletal conditions – 09:20-09:40

Dr. Marco Liccardo – PRP in orthopaedics. Is it actually an effective weapon? – virtual lecture – 09:40-10:00

Priv.-Doz.Dr.Christof Pabinger – Bone Marrow Derived CD34 + cells and Leukocytes in 729 Children and Adults with Non-malignant Diseases – virtual lecture – 10:00 – 10:20

Dr. Rowan Paul – Clinical decision making in Regenerative Orthobiologics” – virtual lecture – 10:20-10:40

Dr. Arif Soemarjono – How to prescribe PRP injection doses in MSK conditions – virtual lecture – 10:40-11:00

Dr. Dzihan Abazovic – The art of treating cartilage and bone tissue with regenerative medicine – 11:00 – 11:20
Prof. Dr. Darin Ferdinando – “Our experience with the bio-engineering tissue” – virtual lecture – 11:20 – 11:40

Assist. Prof. Elif Aysen Palaz, MD – “Intraarticular injection of autologous cytokine rich serum in the management of osteoarthritis and early cartilage damage” – 11:40-12:00

Dr. Georgios Ath. Skarpas – “Regenerative medicine in Orthopaedics: application options and good practice” – 12:00 – 12:20

Dr. Bartolomei Bobojc – Early results of conservative treatment symptomatic moderate stage of meniscus injuries and early degenerative disorders in the knee with the use of dry needling and PRP (Platelet Rich Plasma) injections under USG control.” – 12:20 – 12:40

QnA – 20 min. – 12:40 – 13:00

REGENERATIVE DERMATOLOGY AND TRICHOLOGY

13:00 – 15:10

MODERATOR: Dr. Dolly Fatsea

Presentation: 20 minutes
Konstantinos Giotis – “DHI Vs FUE Vs FUT” - virtual lecture – 13:00 – 13:20

Dr. Tayfun Oguzoglu – “Regenerative therapies in Hair Loss and Hair Transplant surgery- virtual” – 13:20 – 13:40

Dr. Dolly Fatsea – “Which PRP? – A solid foundation for the non invasive D-Lift” – 13:40 – 14:00

Lawrence A. Rheins, Phd – “The role of autologous PRP growth factors in regenerative photodamaged facial skin”- virtual – 14:00 – 14:20

QnA – 20 min. – 14:20 – 14:40

Coffee and Lunch – 30 min. – 14:40 – 15:10

REGENERATIVE AND AESTHETIC GYNECOLOGY I

ANTIAGING AND HORMONE THERAPY

15:10 – 18:10

MODERATOR: Dr. Sheikha Alia Alqassimi / Dr. Amr Seifeldin

Presentation: 20 minutes

Dr. Michalis Chrysostomou – “Regenerative Medicine in Gynecology and Infertility” – 15:10 – 15:30
Dr. Suada Tinjic – “The influence of autologous in vitro activation of ovaries by stem cells and growth factors on endocrine and reproductive function of patients with ovarian insufficiency” – 15:30 – 15:50


Dr. Amr Seifedin – “Management of Clitoral Dysfunction in FGM with Regenerative & Aesthetic Gynecology Techniques” – 16:10 – 16:30

Dr. Rashad Haddad – “Holistic view to the Regenerative Gynecology” – 16:30 – 16:50

Dr. Zuramis Estrada Blanco – “Urogynecological complex Chronic Pain – novel approach with double bipolar radiofrequency and cell matrix for intraurethral and intravaginal woman disorders” – 16:50 – 17:10

Dr. Sheikha Alia Alqassimi – “The role of Regenerative Medicine in Gynecology” – 17:10 – 17:30

Dr. Feruza Gafarova – “Restorative medicine: advanced tools to optimal longevity” – 17:30 – 17:50

**QnA – 20 min. – 17:50 – 18:10**
PLASTIC SURGERY AND REGENERATIVE MEDICINE

09:00 – 10:20

MODERATOR: Dr. Athanasios Athanasiou

Presentation: 20 minutes

Dr. Athanasios Athanasiou – “Enhancing the results of high definition procedure, using optimal PRP in fat transfer” – 09:00 – 09:20

Dr. Alessandro Gennai – “The evolution of SEFFI procedure (Superficial Enhanced Fluid Fat Injection) : the new age of Autologous Regenerative Aesthetic treatment” – virtual – 09:20 – 09:40

Dr. Aris Sterodimas – “Regenerative Plastic Surgery: The role of Stromal Enriched Lipograft” – 09:40 – 10:00

QnA – 20 min. – 10:00 – 10:20
NEUROLOGY AND PAIN MANAGEMENT
10:20 – 12:50

**MODERATOR:** Dr. Ernesto Cidranes / Dr. Himanshu Bansal

**Presentation:** 20 minutes

**Dr. Ernesto Cidranes** – “Spine stem cells: my DREAM come TRUE” – 10:20 – 10:40

**Dr. Joel I. Osorio** – *No Option patients with a neurostimulator system and the use of combinatorial biologics: ioquantine® and Umbilical Cord Tissue as standardized therapy for a possible neuroregeneration on ASIA-A scale.* – 10:40 – 11:00

**Dr. Himanshu Bansal** – “Stem cell Application in neurological diseases” – 11:00 – 11:20

**Dr. Zbiggy J. Brodzinsky** – “Regenerative treatment for Disk Degenerative Disease/DDD” – 11:20 – 11:40

**Prof. Dr. Dusan Maric** – “Spinal cord injuries: stem cell treatment through primofascial system-future perspective” – 11:40 – 12:00 – virtual talk

**QnA** – 20 min. – 12:00 – 12:20

**Coffee and Lunch** – 30 min. – 12:20 – 12:50
REGENERATIVE UROLOGY

12:50 – 14:10

MODERATOR: Dr. Shawket Alkhayal

Presentation: 20 minutes

Dr. Shawket Alkhayal – Platelet Rich Plasma Penile Rejuvenation. 6 years experience. – 12:50 – 13:10

Dr. Abbas Khadra – “Combination of Cord derived stem cells with PRP” – 13:10 – 13:30

Dr. Anis Haddad – “Stem cells and regenerative effects on male sexuality, Myth or reality?” – 13:30 – 13:50

QnA – 20 min. – 13:50 – 14:10
UAE EXPERIENCE IN REGENERATIVE MEDICINE

14:10 – 17:10

MODERATOR: Prof. Mohammed Al-Jumaily / Dr. Zbigniew Brodzinsky

Presentation: 20 minutes

Servane Collette – “Personal & Professional Tips to Grow your Career to The Next Level” – 14:10 – 14:30

Dr. Asa Asawari Bapat – “Regulatory update in Regenerative Medicine” – 14:30 – 14:50

Prof. Dr. Mohammed Al-Jumaily – “Stem cell applications in neurological indications” – 14:50 – 15:10

Dr. Yahya Kewan – “Stem cell applications in cardiology” – 15:10 – 15:30

QnA – 20 min. 15:30 – 15:50

Dr. Suad Trebinjac – “Prolotherapy. Theoretical concepts and current evidence” – 15:50 – 16:10

Dr. Ashok Kumar – “Regenerative Medicine in orthopaedics” – 16:10 – 16:30
**Dr. Alaa Al Wahaily** – “Regenerative Medicine in Gynaecology” – 16:30 – 16:50

*QnA* – 20 min. – 16:50 – 17:10

**SUMMARY & CLOSING REMARKS**

Take Home messages and What’s next
Decidua stromal cells (DSC) for the treatment of ARDS following Covid-19 infection,

Behnam Sadeghi1,2, Elham Roshandel3, Ali Pirsalehi4, Sepide Kazemi1,2, Ghazaleh Sankanian3, Mohammad Majidi5, Maryam Salimi3, Nasser Aghdami6,7, Hoda Sadrosadat2, Sarvenaz Samadi Kochaksaraei1,2, Farshid Alaeddini8, Olle Ringden1 and Abbas Hajfathali3

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Background

Acute Respiratory Distress Syndrome (ARDS) is the most common cause of death in patients infected by COVID-19. The cytokine storm is the main driver of the severity and magnitude of ARDS. Placenta-derived decidua stromal cells (DSCs) have a stronger immunosuppressive effect than other sources of mesenchymal stromal cells. Following intravenous (IV) infusion, these cells initially home in the lung.

Methods

A single-centre, phase 1/2 safety and efficacy study included 10 patients with a median age of 50 (range 14-68) years with COVID-19-induced ARDS. DSCs were administered 1-2 times at a
dose of \(1 \times 10^6\) /kg. Endpoints were safety and efficacy by survival, oxygenation, pulmonary infiltrates, effects on levels of cytokines IL-6, G-CSF, CCL-2 and CRP.

**Findings**

Infusion of DSCs was safe. Oxygenation levels increased from a median of 80.5% (range 69-88) to 95% (range 78-99) \( (P=0.012) \), and pulmonary infiltrates disappeared in all patients. Levels of IL-6 decreased from a median of 69.3 (range 35.0-253.4) to 11 (range 4.0-38.3) pg/mL \( (P=0.018) \), and CRP decreased from 69 (range 5-169) to 6 (range 2-31) mg/mL \( (p=0.028) \). G-CSF and CCL2 levels decreased in 5/7 patients. Two patients died, one of a myocardial infarction and the other of multiple organ failure, diagnosed before the DSC therapy. The other patients recovered and left the intensive care unit (ICU) within a median of 6 (range 3-12) days.

**Interpretation**

DSC therapy is safe and capable of improving oxygenation and clearing pulmonary infiltrates in patients with COVID-19. Cytokines levels are reduced, and patients may leave the ICU after a few days.

Running title: DSCs for the treatment of COVID-19 cytokine storm

Keywords: Decidua stromal cells, Cytokine storm, COVID-19, ARDS, Survival

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Tips on PRP, stem cells application in clinic/office setting

Dr. Himanshu Bansal

The tips and tricks to sort facts and to implement the techniques into successful clinical practice. Let’s simplify PRP, Adsc ,Bmac, Exosomes preparation, their application and make allies in the process.
Garber Miguel M.D.

Regenerative medicine in cardiology, seeks to replace lost or damaged tissue. The tools used to realize these outcomes are tissue engineering, cellular therapies, and medical devices and artificial organs.

A revolution in stem cell biology has led to an explosion of interest in therapies that can awaken the regeneration potential in patients. In just the past decade, we have learned that any cell type from any patient, including cells from a blood sample or skin biopsies, can potentially be reprogrammed into a stem cell, and that patient’s stem cell can generate billions of new cells of a variety of differentiated cell types, including cardiomyocytes, endothelial cells and neurons. Stem cell biology is already changing how we approach human genetics and drug discovery, and clinical efforts to harness stem cell biology for heart failure are well underway.

Progress in other areas of cardiovascular therapeutics will also continue, and this is why we predict that regenerative medicine will begin to focus on major areas where devices, medications, and other approaches will likely leave major unmet needs.

But what will be the first cardiovascular regenerative breakthrough therapy, and when will it occur? Can we predict which cell therapy strategy will improve heart function in a large number of patients?

Several small clinical trials have reported varying degrees of functional improvement which could be considerable in some cases. We here review recent progress in the field, suggest an integrated approach, and outline the many gaps in our knowledge which need to be resolved by intensive laboratory research if regenerative therapy for chronic heart failure is to achieve its future potential.
Dr. Gehad El Bastawisy, Regenecare clinic, Ireland

Immunotherapy with allogenic lymphocytes is used as a treatment option for selected infertility cases worldwide. It has been suggested for other conditions as well e.g. pregnant women at risk of a child with Rhesus -D hemolytic disease, or as a vaccine which might reduce the receptiveness for HIV-1 infection.

In this talk a review of current practice and examining the evidence as well as the safety and efficacy of the procedure.
Can MSCs cure Covid-19?

Dr. Sairam Atluri

Introduction

There are no drugs currently available that can cure Covid-19. The medical community is desperately seeing a solution. Can MSCs with their anti-inflammatory and immunomodulatory properties fill this void?

Methods

There are 10 controlled trials and numerous case series which have been published that evaluated the capability of MSCs to treat seriously ill Covid-19 patients. We have analysed the data from these 10 controlled trials to assess the ability of MSCs to cure Covid-19.

Results

In these controlled trials, 2 groups of patients were compared. In the control group, severely ill Covid-19 patients received traditional therapies and the study group patients were treated with MSCs in addition to the conventional treatments. These trial revealed that MSCs

1. Decrease Mortality
2. Immunomodulate the cytokine storm
3. Decrease hospitalisation days
4. Enhance recovery
5. Decrease inflammatory markers
6. Improve pulmonary radiological findings
Conclusion

Multiple controlled have shown that MSCs have an important role in treating seriously ill Covid-19 patients who are not responsive to conventional treatments. However, in order to improve efficacy the following measures need to be incorporated by the regenerative community.

1. Standardisation of the MSCs
2. Decrease the cost of production of MSCs
3. Need larger well designed randomised controlled trials
4. Ease of regulatory burden from the Governments
Regenerative Orthopedics, Sports Medicine and Pain Management
The ideal management of symptomatic osteochondral lesions of the knee is still a matter of debate. The conventional marrow stimulation techniques like microfracture provide growth of a repair cartilage tissue with histologic and mechanic features different to those of native joint cartilage over the defect. Thus, several different regenerative autologous products such as platelet-rich plasma, platelet-rich fibrin and adipose- or bone marrow-derived mesenchymal stem cell concentrates have been investigated to provide a cartilage coverage with the characteristics of native joint cartilage. Both bone marrow aspirate concentrate (BMAC) and platelet-rich fibrin (PRF) have been shown to offer promising results with their regenerative properties and capacity to provide growth factors when utilized together with biologic scaffolds. Moreover, PRF itself is shown to act like a somewhat stable scaffold with a long period of growth factor release up to 3 weeks. Thus, BMAC together with PRF may be an effective option for the treatment for symptomatic osteochondral lesions of the knee without the need of any other biologic scaffold.

Based on these facts, we have treated a series of patients with focal symptomatic cartilage defects in the knee using the combination of microfracture, BMAC and PRF. Twenty-seven knees of 21 patients with grade III and IV cartilage injury and a follow up of at least 24 months that underwent microfracture along with the application of BMAC and PRF (MF-BMAC-PRF) were included. MF-BMAC-PRF alone was performed for isolated chondral defects; while anterior cruciate ligament reconstruction (ACLR) for symptomatic instability, medial open wedge high tibial osteotomy (MOWHTO) for varus malalignment of the knee, meniscus surgery (partial meniscectomy or meniscus repair) for meniscal injury and
patellar realignment/stability (modified Fulkerson osteotomy and/or medial patellofemoral ligament reconstruction) surgery were added to the procedure when necessary. For MF-BMAC-PRF, arthroscopic microfracture was performed first, followed by the application of BMAC to the microfracture area. Then the area was covered with arthroscopically injectable PRF, which was soaked again with BMAC. Patients were followed prospectively using patient reported scoring instrument consisting of Lysholm score, the Knee Injury and Osteoarthritis Outcome Score (KOOS) and visual analogue scale (VAS) and MRI imaging preoperatively.

The study group comprised of 13 (61.9%) males and 8 (38.1%) females with an average follow up of 28 ± 5.9 months and an average age of 37.2 ± 8.3. MOWHTO for 5 (18.5%), ACLR for 8 (29.6%), meniscus surgery for 13 (48.1%) and patellar realignment/stability surgery for 4 (14.9%) of 27 knees were performed. A total number of 37 chondral lesion were recorded to be on medial femoral condyle, femoral trochlea, lateral femoral condyle, patellar surface and medial tibial plateau (19 (51.4%), 10 (27.0%), 1 (2.7%), 5 (13.5%) and 2 (5.4%), respectively).

Average values of all scores were significantly increased (p<0.001) at final follow up. MRI examination showed a signal intensity similar to healthy cartilage and progressive maturation of repair cartilage in all defects. 4 (10.8%) of the 37 defects were detected to have moderate filling, while 33 (89.2%) showed complete or nearly complete filling.

Application of BMAC and PRF combined with microfracture may be an effective treatment for symptomatic chondral lesions of the knee given that any malalignment, instability, and meniscal injury in the knee is corrected.
Prof. Dr. Stefano Zanasi

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Prof. Murat Bozkurt, MD, PhD

Ankara Yıldırım Beyazıt University; Dept. of Orthopaedics and Traumatology; Dept. of Musculoskeletal Regenerative Medicine

Joint cartilage lesions are seen as a major musculoskeletal system problem that have a negative effect on quality of life, and are observed at increasing rates. Cartilage tissue covering the joint surface has no neurological, vascular or lymphatic organization. Therefore, the intrinsic healing potential is limited. Despite current advances in technology and the accumulated knowledge of basic sciences, there are still problems remaining in the treatment of cartilage injuries. The current treatment options are abrasion chondroplasty, bone marrow stimulation technique (microfracture and drilling), mosaicplasty – osteochondral autograft transfer system (OATS), osteochondral allografts, and cell-based treatment methods such as autologous chondrocyte implantation (ACI) and matrix-induced autologous chondrocyte implantation (MACI).

The MACI technique, which uses tissue engineering techniques, is the implantation to the debrided defect area of scaffolds formed of cultured autologous chondrocytes planted in a 3-dimensional biodegradable matrix. There are several different forms of second-generation autologous chondrocyte implantation, produced in membrane and gel form. Both different forms have their own advantages and disadvantages.

Several studies showing the clinical results of the MACI technique, have compared it with other treatment methods or presented the data of case series. These studies have shown that significant improvements in pain, activity and function have been provided by MACI.

There are some limitations in the use of MACI procedure due to the two-stage surgical technique and some other regulation problems. For these
reasons, some one-stage cellular therapies using mesenchymal stem cells have recently become prominent.

I presented here a novel bio-targeting stem cell therapy for cartilage lesion and cellularized massive osteochondral allograft reconstructions.
Articular cartilage injuries lead to progressive degeneration of the joint with subsequent progression to osteoarthritis, which currently becomes a serious health and economic issue. Due to limited capability for self-regeneration, cartilage repair remains a challenge for the present-day orthopedics. Currently, available therapeutic methods fail to provide satisfactory results. A search for other strategies that could regenerate a hyaline-like tissue with a durable effect and adequate mechanical properties is underway. Tissue engineering strategies comprise the use of an appropriately chosen scaffold in combination with seeding cells. Mesenchymal stem cells (MSC) provide an interesting new option in regenerative medicine with solid preclinical data and first promising clinical results. They act not only through direct cartilage formation, but also due to paracrine effects, such as releasing trophic factors, anti-inflammatory cytokines, and promoting angiogenesis. The MSC can be applied in an allogeneic setting without eliciting a host immune response. Out of the various available sources, MSC derived from Wharton’s jelly of an umbilical cord seem to have many advantages over their counterparts. This presentation details a novel, single-staged, and minimally invasive technique for cartilage repair that involves dry arthroscopic implantation of scaffold-embedded allogenic mesenchymal stem cells isolated from umbilical cord Wharton’s jelly.
Bartłomiej Bobójć M.D.

Introduction.

Horizontal meniscal damage is a common problem in our clinical work. In the era of the development of medical diagnostics, especially magnetic resonance imaging and ultrasound, we are able to detect early, incomplete damage to the meniscus. Often these changes are symptomatic, especially in young patients and athletes.

Objective.

The aim of this study is to improve the health of patients with traumatic and degenerative meniscal injuries, for whom the previous conservative treatment has not brought satisfactory results.

Material and methods.

We enrolled patients in a prospective medical study due to pain in the medial compartment of the knee joint, confirmed damage to the medial meniscus in grade I or II according to Reicher et al. In MRI 1.5 or 3 T. local anesthesia under ultrasound control and administration of PRP to the damaged structure of the meniscus. After the procedure, the patient was monitored by ultrasound and MRI after 3 and 6 months.

Results.

In 33 patients, aged 21 to 60 years, a statistically significant improvement was observed in the functional assessment of the knee joint after 3 and 6 months using the KOOS questionnaire. A better result was found in almost all KOOS subscales (symptoms, stiffness, daily activities, activity, quality of life). We also obtained pain reduction assessed on the VAS scale. In some MRI examinations, we observed progressive healing of lesions of the medial menisci.

Conclusions.

Performing a symptomatic repair of incomplete meniscus damage may alleviate or result in complete pain relief, may prevent its further damage in the future, delay or stop degenerative processes, and thus slow down degenerative changes in the knee joint. The procedure we propose can create a scar at the site of damage and support biological processes that regenerate the damaged meniscus.
Articular cartilage defects are frequent and challenging clinical problem, especially in young and active population. There are numerous cartilage repair techniques available now, but autologous chondrocyte implantation (ACI) is currently considered as the golden standard, as it provides the best tissue quality.

However, ACI is a 2-step operation, it is resource intensive with high regulatory demands, and it causes additional morbidity to the patient during the harvesting step. Autologous minced cartilage implantation is relatively simple and cost-effective technique with promising initial clinical results.

This lecture will provide rationale and surgical technique for all-arthroscopic, one-step implantation of minced articular cartilage.
Subchondral Bone Marrow Lesions (BML) of the knee have been associated with progression of osteoarthritis and osteonecrosis. Several types of interventions are available for the treatment of painful bone marrow edema syndromes that are resistant to conservative treatment. Injection of bioactive cement into the lesion, the so-called “subchondroplasty” procedure, aims to decompress intra-osseous pressure and provide structural support followed by eventual remodeling of the cement to cancellous bone. Most studies have shown reduction in pain scores and improved function and patient satisfaction at short to mid-term follow-up with subchondroplasty. Conversion to knee arthroplasty has been reported to be between 12-30% at 10 months to 7 years (1). However histological analysis of BML’s have demonstrated necrosis & fibrosis, lymphocytic infiltration, increased vascularity & reduced mineralization. This has led to the investigation of orthobiologics with mesenchymal stem cells and cytokines for the treatment of these BML’s. Subchondral injection of Bone Marrow Aspirate Concentrate (BMAC) alone or in combination with intra-articular injections have resulted in promising outcomes in pain scores, function and the delay of knee arthroplasty (2). Although a growing body of publications support the use of subchondral orthobiologics in the treatment of bone marrow lesions (3), better quality studies are needed to define their exact role. This presentation aims to review the current evidence on the role of subchondral procedures in the treatment of painful bone marrow lesions along with the personal experience of the author.

References


USE OF ADIPOSE-DERIVED ORTHOBIOLOGICS FOR CARTILAGE DEFECTS REPAIR

FABIO VALERIO SCIARRETTA

CLINICA NOSTRA SIGNORA DELLA MERCEDE – ROMA

Goal of our study was to assess the clinical, imaging and histologic outcome of LIPO-AMIC technique (autologous matrix-induced chondrogenesis + ADSCs and adipose tissue transfer) consisting of osteochondral lesion debridement, microfracturing and filling with bilayer cell-free collagen scaffold soaked in adipose regenerative product.

Methods

Eighteen patients (age range: 28-58) with OCL repaired using LIPO-AMIC technique were clinically evaluated through IKDC, KOOS and VAS scores, with follow-up between 12 and 60 months. MRI examinations were performed at 6, 12 months and yearly thereafter. Adipose tissue product used in surgical procedures has been analysed in the laboratory. ADSCs, pericytes, endothelial and progenitor stem cells embedded in the extracellular matrix of the stromal vascular fraction, obtained by mechanical dissociation, have been isolated and characterized in terms of viability and cell composition using multicolor FACS analysis.

Results

No intra or post-op important complications were encountered.

Patients showed relevant, immediate and durability improvement of various scores already from initial follow-up. At intermediate and final follow-up all scores were significantly increased (p<0.001). MRI examination, completed by T2 mapping imaging, showed early subchondral lamina regrowth and progressive maturation of the repair tissue. Histological studies shown that stem cell population resided in a perivascular location with preserved architecture and where ADSCs coexisted with pericytes and endothelial cells. FACS analysis confirmed high viability and a dramatic increased percentage of endothelial cells.

Conclusion

Repair of full-thickness cartilage injuries by LIPO-AMIC technique provides good to excellent clinical improvement, MRI defect filling and, at histologic evaluation, high percentage of ADSCs and endothelial cell populations with high viability and niche preservation. Results resulted improved in respect to standard AMIC technique and comparable to MACI, at significantly reduced costs.
Dimitrios Tsoukas MD MSc

Sports and Regenerative Orthopaedic Surgeon HYGEIA Hospital Athens Greece.

Founder and Director Minimally Invasive Orthopaedic and Sports Medicine Surgery Center MIOSMED, ICRS and ISAKOS accredited teaching Center.

The future in medicine lies in regenerative medicine, with the potential to grow new tissues and organs to replace damaged or diseased ones by utilizing stem cells(4), which have the capacity to self-renew and differentiate into many different types of tissue. Mesenchymal stem cells from bone marrow or adipose tissue are widely used the years especially for knee osteoarthritis Kellgren Lawson stages late 2,3 and early 4.(3) Having great experience with SVF(5) from minor belly liposuction we proceed to a novel technique for orthopaedic surgeons: adipose stem cells from knee liposuction for knee osteoarthritis.(1) The last 3 years (March 2018 to April 2021) we injected in the arthritic knee of 64 patients (39 females -25 males) SVF after centrifuge of adipose tissue derived from the medial side of the knee. We checked with flow cytometry the final product of the centrifugation and we checked our patients with Xrays standing and MRIs of their both knees and they filled two questionnaires about their clinical and functional status. We repeated these tests at 3, 6, 12 months and 2 and 3 years post the injection with Xrays at 2, 12 24 and 36 months and MRI at 1, 2,3 years. We found that SVF from minor knee liposuction have comparable results(4) with those from belly liposuction for knee arthritis with advantage of the method the same anatomical area for obtaining the adipose tissue and performing the injection. Best functional and clinical results are at the first 3 years post SVF intraarticular injection and the best MRI and clinical results for focal cartilage lesions(2) are the first 2 years post SVF injection.

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Ram Yaron, MD.

Assuta Hospital, Tel-Aviv, Israel

Platelet-rich plasma (PRP) injections are gaining popularity worldwide. The potential for biologic healing augmentation combined with low risk for adverse reaction makes PRP an attractive treatment option in orthopedics and in shoulder surgery. The main indications for PRP injection in the field of shoulder surgery are rotator cuff (RC) tendinopathy, partial thickness RC tears and augmentation in surgical RC repair. Numerous studies over the past decade evaluated the outcome of PRP application for the treatment of these pathologies, most of them are low-quality retrospective trials with controversial results. The few high-quality randomized clinical trials, which were published to date, suggest that PRP may yield better long-term outcome compared to other injectable substances (e.g., corticosteroids) for the treatment of RC tendinosis and partial thickness tears. The use of PRP augmentation in surgical RC repair was found to decreased pain at the early postoperative rehabilitation and to reduce the re-tear rate in patients with small or moderate RC tears, with no effect on long-term clinical outcomes. This presentation summarizes the current evidence-based knowledge regarding PRP application for the treatment of shoulder pathologies and intend to provide guidelines to practitioners on treatment with PRP injections.
Dr. Dzihan Abazovic

**Background:** Regenerative medicine enables us to stimulate physiological processes using autologous components, allowing for functional healing and regeneration of nearly every tissue. Researchers in this field have made significant progress toward regenerating or replacing tissues due to diseases of ageing. Current strategies mainly include the application of autologous stem cells and growth factors.

**Objectives:** We will present the latest technological advances and the importance of quality control before the application of autologous PRP in order to stimulate regeneration, revascularization and improve collagen and elastin synthesis. Further, we will show the quantity and phenotype of bone marrow aspirate concentrate harvested from different donor sites. Moreover, we will demonstrate the clinical application of these autologous components and future directions.

**Methods:** We developed a protocol for adequate platelet and leukocyte concentrations. Our quality control is essential for PRP applications. Increased collagen and elastin activation was achieved by ensuring optimal platelet concentration in PRP. Further, we can monitor the clinical outcomes of PRP treatment with consistent platelet and leukocyte quantities and quality. The iliac crest is most commonly used for Bone Marrow harvesting. Common sources are also the vertebral body, talus, humeral head etc. Each source shows high variability in cell count and phenotype. The latest data showed that different phenotypes show various potentials in the regeneration and reparation of the targeted tissue. Our current research is aligned with this hypothesis.

**Results:** The therapeutic potential of several cell types, including tissue-derived stem cells, has been studied in many pre-clinical studies with encouraging results. Stem cell therapy has the potential to treat currently untreatable neurodegenerative disorders and many more. Exosome-mediated therapy may be useful in clinical settings because of their accessibility and capability to deliver genetic information.

**Conclusion:** The use of autologous components in regenerative medicine holds great promise. PRP, Stem cells and exosomes as bioactive molecules and mediators of numerous intercellular communication may help in various medical fields by controlling cell proliferation, angiogenesis and inflammatory process required for the regeneration.

**Keywords:** regenerative medicine, stem cells, platelet-rich plasma, exosomes
The art of treating cartilage and bone tissue with regenerative medicine

Dr. Dzihan Abazovic

Background: Orthopedic treatment for cartilage repair is still a challenge. Despite advances in science and treatment, chondral lesions remain difficult to treat. Blood vessels are required for circulation and the distribution of progenitor cells as part of the normal healing process, and due to lack of blood vessels, chondral lesions have limited natural ability to repair themselves.

Objectives: This presentation aims to introduce the new, completely autologous concept in perioperative preparation and application of autologous cartilage scaffold, produced from bone marrow mesenchymal stem, platelet-rich plasma and bioregenerative fibrin.

Methods: This concept results from an interdisciplinary approach, which attempts to speed up the healing process of cartilage tissue. The idea is based on the hypothesis that any allogenic material can operate as a physical barrier and inhibit the ingrowth of new cartilage tissue. For the scaffold preparation, as autologous components, bone marrow aspirate concentrate (BMAC), platelet-rich plasma, bioregenerative fibrin and thrombin were used.

Results: Preclinical and early clinical investigations have shown their high potential for connective tissue engineering, such as bone and cartilage. The preliminary outcomes from our group of patients are promising, and MRI findings show full cartilage integration in a shorter time compared with collagen scaffold. Hence, we are considering the possible use of an autologous cartilage scaffold to treat chondral defects.

Conclusion: The application of autologous cartilage scaffold gives good results in patients with the chondral lesion. Indeed, this concept significantly affects short-term life quality in our patients. The current results of our research, which is still in the preliminary phase, support this hypothesis.

Keywords: autologous cartilage scaffold, bone marrow stem cells, platelet-rich plasma, bioregenerative fibrin, chondral lesions, regenerative medicine
Branko Vorkapic,
Pro Fizio clinic for rehabilitation, Belgrade, Serbia

INTRODUCTION

Medical rehabilitation of musculoskeletal conditions promotes functional recovery of the human locomotor system. This functional recovery is frequently limited by presence and effects of different acute or chronic structural disorders of the musculoskeletal system. Application of different regenerative medicine agents has presented a breakthrough in understanding the healing process of musculoskeletal structures. The effects of regenerative medicine procedures, on general functional recovery of locomotor system, its quality and effectiveness, are yet to be explored.

Musculoskeletal conditions that we refer to in this presentation are degenerative conditions of joints and their internal and external structures, acute trauma of muscle, tendinous tissue, and internal and external joint structures. In terms of rehabilitation, we will address pain patterns, gait assessment, and neuro-motor control recovery.

PURPOSE

The purpose of this presentation is to suggest possibilities of synergistic effect related to regenerative agents and medical rehabilitation procedures in the treatment of different musculoskeletal conditions.

METHOD

Comparison of prospective approaches from the open literature. Comprehensive qualitative and quantitative evaluation of a satisfactory enough number of cases from personal practice.

DISCUSSION

Presented information should indicate that the effects of application of regenerative medicine agents can be evaluated through its impact on rehabilitation process and functional recovery of musculoskeletal conditions. Future studies on this topic should measure the effectiveness of different regenerative agents use and different rehabilitation protocols and their interrelation in the manner of detecting the superior treatment protocols.

KEYWORDS:

Musculoskeletal conditions, Regenerative medicine, PRP, Hyperbaric oxygenation, Rehabilitation.
PRP in orthopaedics. Is it actually an effective weapon?

Marco Liccardo, MD

Introduction

The challenge of Regenerative medicine and surgery (REGMED), is well described by the idea of “repairing” the body instead of “substituting” it. So, in orthopaedics we focused our attention on a wide cluster of pathologies: cartilage disease, tendon and bone disease, non healing fractures. Surgical treatments like substitutive surgery, plays an important role in improving the quality of life in Orthopaedic patients. In this kind of surgery the high level of security and results obtained are well known. Nevertheless it is mandatory to look for further solutions and regenerative techniques which are quite an amazing field to do this. So we are all looking for alternative solutions that could lead to the enhancement of tissue regeneration and to the reduction of degenerative mechanisms to avoid or also to delay, for an acceptable period, the surgical solution.

Platelet-rich plasma has been used since the beginning of the 2000’s for conservative treatment of cartilage and tendon diseases; during the suture of tendons; in open reduction and internal fixation (ORIF) of severe fractures.

Now we thought that a thorough analysis of the PRP “quality” is mandatory, in order to obtain reproducible and comparable results, as also the main Authors recommend. (1,2)

Materials

One hundred and sixtytwo (162) patients were admitted at the study. The main pourpose was the study of the quality of samples in terms of number of platelets, sterility of the sample, Growth factors dosage, in order to evaluate the possibility of a standardization that allows to compare the procedures and the results. In fact if we use different methods that could take to different products it could be difficult to substan the value or the failure of this kind of therapy.
Methods

All patients underwent a preliminary evaluation by the hematologist in order to establish the presence of general criteria for inclusion in the study.

The general criteria were the age (< 75 y.o.); no use of aspirin; PLT number (> 250,000).

Every patient underwent two withdrawals: the first in the day of beginning of the procedure (T 0) and the second at the fifteenth day (T 15).

Every sample was divided in two parts: the first one was immediately used and the second was frozen under 25 degrees, according to Italian law, about blood derivatives storage and injected at the seventh (T 7) and at the twenty first (T 21) day.

Both parts were tested in order to measure the number of platelets, G.F. dosage and sterility.

Results

All samples showed a high level of platelets (average > 1,000,000) no contamination and a level of G.F: at the top of the curve.

In a second group we show preliminary clinical results obtained using H.A. (Hyaluronic Acid) versus PRP in Hip O.A.

In this group were included 48 patients (28 HA; 20 PRP). The results show different behavior with the different substance used for the injection.

This preliminary results are discussed.
In the past decade, bone marrow (BM)-derived cell-based therapies have been increasingly performed in various fields of regenerative medicine. Yet, little is known about standard values of these BM cells. Furthermore, CD34 + cell counts, markers for multipotent hematopoietic stem cells, are still not routinely reported in therapeutic studies with autologous BM. Thus, crucial knowledge of what we are doing in regenerative medicine is at least in part lacking. The reason for this discrepancy may be that hemato-oncologist, who have the best knowledge in BM physiology, rarely engage in regenerative medicine, while on the other side, specialists (mainly surgeons) engaged in regenerative medicine lack specialization in hematology.

Autologous BM-derived cell-based therapies in regenerative medicine are on the rise. While it is generally known that BMA contains a mix of nucleated cells and other biologics such as growth factors and exosomes, comprehensive information regarding normal ranges of leucocytes and/or CD34 + cell counts in BMA in a large series of patients of all age groups was missing.
Platelet Rich Plasma Prescription in Musculoskeletal Problems

Arif Soemarjono, MD.

Indonesia FlexFree Musculoskeletal Rehabilitation Clinic

Platelet Rich Plasma (PRP) has been using to treat various musculoskeletal problems for more than two decades. There is increasing amount study of PRP in this time, however there is still controversial and contradictory results among those studies. What we can do and should notice when using the PRP to treat the musculoskeletal problems in the clinical settings. The objectives for this lecture are to understand the PRP facts, the factors determine the success treatment of the PRP, the PRP preparation, and the PRP prescription parameters in musculoskeletal problems.
The Authors take cue from their experience to bring the descriptive aspects of the various bio-engineering products in the reconstruction of the bone, in the losses of substance, in the results of infections and in the reconstruction of the cutaneous mantle. In the case of the bone we realized the combination of BMP associated to gel of autologous plaques and to autologous bone, withdrawn usually from the iliac wing. In some cases, then, we dress the part again with a membrane of hyaluronic acid that has periosteum-similar properties. In the case of the skin, we use a sample of autologous skin that has been elaborated in the laboratory, building the derma (Hyalograft 3D) and the epidermis (Laserskin).

The results have been satisfactory for the reconstruction of the bone both as its bio-compatible structures and for the biomechanical aspect. The epidermis has given us so much problems, in the reconstruction of the cutaneous mantle, that we recently have replaced the part with the Hyalomatrix (hyaluronic component) that induces the formation of granulation tissue that is valid for autologous skin graft. The authors bring some clinical cases.
Assist. Prof. Elif Aysen Palaz, MD

Autologous Cytokine Rich Serum (ACRS) is a simple and minimal invasive method that contains increased concentrations of the natural interleukin 1 receptor antagonist (IL-1Ra) which is called osteoarthritis-inhibiting protein. The main purpose of this study was to evaluate the efficacy of ACRS injections on the healing of osteoarthritis and early cartilage damage.

We treated 411 patients and 466 joints (55 patients presented bilateral lesions) affected by degenerative joint conditions who had failed previous treatments or had taken any treatment with multiple ACRS injections and physiotherapy. Visual analog scale (VAS) was used for clinical evaluation before and 12 months after treatment. 2-3 ACRS injections were performed at ten day intervals into the site of the joint, tendon or cartilage. For shoulder joint ultrasound guided injections were performed. Complications were also recorded.

Significant improvement in VAS was observed at the end of 1 year of the injections in patients with degenerative conditions.

The clinical results are encouraging, indicating that ACRS injections have the potential to promote the achievement of a satisfactory clinical outcome, further prospective studies are needed to confirm these results.
G.A. Skarpas, MD PhD

University of Patras
Hellenic Open University
Orthopaedic Dept. for Sports Injuries & Regenerative Medicine, General Hospital MITERA

Introduction

Regenerative Medicine through bioengineering is a new frontier for medical practice. For the last 15 years there has been an enormous research on this field. The purpose of this study is to introduce the state of the art methods of regenerative techniques as well as the most effective bioengineering products.

Material-Method

What makes stem cells special is that they can divide and duplicate themselves as well as develop into different types of cells. The hypothesis is that, when placed into a certain environment, stem cells can transform to meet a certain need. For example, stem cells that are placed near damaged tendon are developing into healthy tendon cells. The process of collecting stem cells is called harvesting. Physicians usually harvest stem cells from the patient’s adipose tissue (fat), blood, or bone marrow. Fat can be collected through punch biopsy or liposuction. These cells are then cultivated by means of tissue bioengineering techniques, in order to produce multipotent stem cells. On the other hand a blood sample from the patient can be used to harvest peripheral blood stem cells, which are found in the bloodstream and through special bioengineering protocols these cells are activated and primed for healing and regenerative use. Furthermore bone marrow stem cells can be harvested from the pelvic bone or tibia using a needle and syringe. The process is called bone marrow aspiration. From then on with bioengineering methods, these cells are primed and activated for regenerative medicine techniques.

Results-Discussion

In degenerative joint disease, regenerative medicine treatments, through bioengineering process, and products are typically used to repair or replace damaged cartilage, tendon, and ligament tissues by: Amplifying the body’s natural healing abilities, Enhancing the growth of new tendons, ligaments, or cartilage tissue. The goal is to reduce pain and improve function. There are three types of Regenerative Medicine Treatments enhanced by bioengineering: 1. Stem Cell Treatments, 2. Platelet Rich Plasma (PRP), 3. Operative Procedures for Cartilage Regeneration. Different techniques may be used for cartilage repair, including but not limited to microfractures, nanofractures or abrasions in the bone directly below the cartilage injury, implanting engineered tissue made from stem cells together with a bioengineered scaffold—a sort of microscopic...
netting that holds the cells until they mature and grow. The results of these procedures lead to promising combinations with proper rehabilitation protocols—always individualized.

Conclusion

Regenerative medicine through bioengineering, is a golden standard for musculoskeletal lesions treatment and can easily be used together with traditional nonsurgical treatments, such as rest, bracing, taping, and/or physical therapy to improve flexibility, strength and to optimize healing. Regenerative medicine is not limited to treating degenerative musculoskeletal conditions only. For example, tissue engineering allows skin tissue to be created for burn victims. Other applications, such as developing artificial organs, are being researched.
Konstantinos Giotis

Founder DHI Global

Simulation Training – The benefits

VR is entering our corporate training and learning experience, so it’s important to understand the benefits that can be gained for both the learner and the organization. Here are some of the biggest benefits of virtual reality training has to offer:

Do the Impossible - Safety first!

Virtual reality training forces trainees to get out of their seats and practice the learning objective. As the name implies, you’re getting as close to real-life training as possible. VR gives you the ability to go beyond telling students what they’ll experience in the field and showing them instead; placing them in those actual scenarios and experiences — without the risk. That means more Safety for our patients!

More Practical Hands-on Approach

Virtual reality training gives you the ability to give your trainees practical hands-on exercises the first time and as many times as it takes for each to get it perfect before they ever do it in the real world. They will feel that they work in a real surgical room environment with the necessary medical equipment.

Make Serious Mistakes — and Walk Away From Them!

Virtual reality gives you the ability to let trainees make all their mistakes, even the potentially fatal ones, in the safety of a simulated world and respawn to try again.

Boost Learning Retention
Sitting through the class, passing the test, and getting the certificate is of no value if you can’t recall your training when you face the situation in the field! Knowledge retention is critical, especially for specialized training that focuses on protocols that will only be encountered occasionally (if ever) in real life but which have to be performed more or less perfectly when they are.

**Phobia Therapy-Reduce the stress**

The gradual and continuous exposure to the session process in a virtual environment may help to reduce the stress that trainees use to have before they work in a real clinic environment.

We prepared a virtual software that will assist to achieve a faster & better training system for doctors, assistants.

To be more specific we will establish an animation-modeling system with character deformations and rendering.

The software will consisted by a VR scenario where a male bald patient -in with a provided animation for both sitting and lying down positions- on VR session room.

Our trainees will have the opportunity through this system to practice on bald animation patient.

So we will prepare a complete VR system with all the essential, for the operation, tools such as mechanics development for the operation steps. i.e patient’s head marking with virtual marker, local anesthesia etc.

These software shall include time and scoring system with the implementation of errors and critical errors – as will be provided by our protocols.
O.TAYFUN OGUZOGLU, MD FISHRS

Introduction:
There have been some important changes in hair transplant operations after the transition to FUE from FUT method. The most important one is the operation duration. In FUT operations, follicles remain outside of the body around 2-3 hours whereas in FUE operation this time period is longer than 4 hours. As hair surgeons, we tried to create new innovations to tackle these problems. We tried to advance our technique to shorten the time period that hair follicles remain outside of the body. Furthermore, we tried to find and use the holding solutions that are most compatible to body’s composition.

Objective:

Our aim is to shorten the duration of the FUE operations. Furthermore, we project to work on a holding solution that is more compatible to the body component and cheaper.

Methods:

We contain hair grafts in AMT solutions that are extracted from the patient’s own hair grafts. In this way, we aim to avoid graft reperfusion or dryness before the implantation. In this way, our goal is to increase regrowth rates to a maximum and reach satisfying results. On the other hand, we also aspire to inject a portion of the AMT solution to the recipient area to increase blood circulation.

Results:

Application of the AMT solutions to the FUE operations decreases the Effluvium rates after the operation. Furthermore, it helps the implanted hair grafts to reach Anagen phase and look earlier. In this sense, it possible to reach a satisfying look in 8 months.

Conclusion:

The usage of the holding solutions that are autologous and most similar to the body component plays an important role in FUE operations to reach satisfying results.
Lawrence A. Rheins, Phd

Although minimally invasive devices continue to serve as a mainstay in aesthetic medicine, functional cosmetic products continue to evolve, providing patients and providers with complementary and adjunct treatments, enhancing the overall aesthetic experience. The presentation will focus on the development of biomolecules/growth factors used in many topical products worldwide.

Further, data will be presented demonstrating the role of autologous PRP in a natural vehicle serum to mitigate key conditions associated with photodamaged facial skin. Dermatologist impressions, immunohistochemistry, light and scanning microscopy results will be shared. As consumers continue to look for personalized skin care products, autologous skin care with PRP represents the next frontier for functional regenerative cosmetic products.
Regenerative and Aesthetic Gynecology
Regenerative Medicine in Gynecology and Infertility

Dr. Michalis Chrysostomou, MD

Regenerative Medicine may be defined as the process of replacing or “regenerating” human cells, tissues or organs to restore or establish normal function. This field holds the promise of regenerating damaged tissues and organs in the body by replacing damaged tissue or by stimulating the body’s own repair mechanisms to heal tissue or organs.

Current estimates indicate that approximately one in three Americans could potentially benefit from Regenerative medicine.

In the field of Gynecology, regenerative medicine approaches to repair or replace damaged diseased urogenital tract organs, such as the urinary sphincter, pelvic floor, uterus, ovaries and vagina.

Platelet rich plasma (PRP) has gained a lot of acceptance, being a non-operative treatment for multiple medical disorders including gynecology in view of it being a noninvasive, affordable, simple, easy to perform and being effective.

We have contacted 2 studies using the application of PRP for patients suffering from Lichen sclerosus and patients suffering from infertility due to mainly lower ovarian reserve.

In the first study, between November 2016 and December 2020, 25 women with biopsy proven Lichen sclerosus which were unresponsive to topical steroid treatment were enrolled in the study.

All patients received 2 PRP treatments 4 to 6 weeks apart. A repeat biopsy was performed 8 weeks after the second PRP treatment in 14 patients.

Nearly all patients exhibited clinical improvement in the size of their lesions and in five cases, lesions totally disappeared after RPP treatment. Fifty-eight percent of the patients had become free of symptoms and twelve patients didn’t need further steroid therapy.
In the second study between March 2017 and December 2020

30 patients were enrolled for PRP application in the ovaries. The inclusion criteria were 7 patients with premature ovarian failure, 5 patients in menopause, and 18 patients with diminished ovarian reserve.

Approximately 3 to 4 ml of autologous PRP was injected into each ovary under transvaginal sonogram guidance. Each patient was checked every month for FSH, LH, DHEA, PRL and Estradiol for 1 year and AMH every 3 months for a year.

Following this protocol an increase in FSH and decrease in AMH and E2 was recorded in the first 2 to 3 months in 20 patients and no change in 10 patients. From the 3d month up to 16 months an increase of AMH and decrease of FSH levels was recorded in 18 patients.

We had 4 pregnancies which 2 of them miscarriage between 6 and 7 weeks and 2 are ongoing at 13 and 15 week of gestation.

Due to the limited sample in our studies a randomized control trial (RCT), with a larger sample size is required to further evaluate the efficacy of PRP add-on treatment.
MD PhD Suada Tinjic  
Bosnia and Herzegovina

**Introduction:** Premature ovarian failure (POF) occurs in 1% of women, in age 35-40, mostly of unknown cause, and leads to reduction or loss of female reproductive function. Many factors cause the interruption of the Hippo signaling pathway and the termination of follicular growth resulting in the onset of amenorrhea and menopause. The pathway of phosphatidylinositol-3-kinase / protein kinase B (PI3K-Akt) plays a key role in cellular responses to cell proliferation. PI3K-Akt signaling is associated with ovarian function, growth of primordial follicles, yellow body survival and oocyte maturation.

**Materials and methods:** The SEGOVA method (therapy with autologous concentrated growth factors and autologous stem cells and in vitro activation of the tissue of the ovaries) acts on the described intracellular signaling system.

The study included 50 patients, 30 to 50 years of age, with a diagnosis of POF and infertility. The study was performed at Jevremova Special Hospital in Belgrade, Saint James Hospital in Malta, and RemedicaSkoplje Hospital, between 2015-2018.

**Aim:** The goals of longitudinal prospective observational study were:

1. To investigate the blood levels of FSH, LH, progesterone and estradiol before and 3, 6, and 12 months after the procedure of in vitro activated ovarian tissue.
2. To investigate if the volume of retransplanted activated ovarian tissue affected the levels of FSH, LH, progesterone, and estradiol hormones.
3. To investigate if the volume of the bone marrow and total nucleated cell count taken before the treatment correlated with hormone level at 3, 6, and 12 months after the treatment.
4. To investigate the effects of in vitro ovarian activation on reproductive function, follicle count, number and quality of aspirated cells, and number of embryos.

**Results:** The sample of 50 patients monitored over 12 months exhibited that SEGOVA has a positive effect on the endocrine status and the reproductive outcome of patients. Out of all patients, 64% (32 of 50) had follicles present. Out of 32 patients who had follicles, 25% had oocytes (8 of 32). The fertilization rate of the aspirated oocytes was 75% (6 of 8), resulting in embryos.
Embryo transfers were performed in 66.67% embryo positive women (4 of 6), while 50% of embryo positive women (3 of 6) had vitrified embryos.

Out of all patients who had embryo transfer, 75% (3 of 4) resulted in successful pregnancies, which is 6% of total number of patients (3 of 50). Two patients spontaneously conceived after transplantation and one pregnancy was conceived with IVF. Three pregnancies resulted in the successful birth of 4 newborns (one twin pregnancy). There are still 10 vitrified embryos left. The levels of FSH, LH, and Progesterone show significant decrease, and estradiol increase, 12 months after the procedure.

**Conclusion:** The application of the SEGOVA method in the future could solve many problems in human reproduction due to a large number of patients diagnosed with POF, as well as the possibility of delaying menopause, thus improving the quality of life and general health.

**Keywords:** Premature ovarian failure, growth factors, stem cells.
Carolyn DeLucia, MD

Shockwave has been used in orthopedics and pain management for decades. Now learn how the healing power of Low Intensity Extracorporeal Shockwave is changing the panorama of sexual health in both men and women. Hear the data collected worldwide and explore the potential.
Amr Seifeldin (2021)

**Background:** Female Genital Mutilation (FGM/C), is a cultural tradition widely practiced in Africa, Middle East and Asia, it causes serious health complications on the physical and psychosexual levels. Increased global awareness, of FGM and recent sexual health trends, has necessitated a need for regenerative and restorative procedures, to reverse the ill effects of FGM.

**Method:** 107 patients were selected with female genital mutilation Type II and Type III, age was between 18 and 36 years. Patients answered a female sexual function index (FSFI) questionnaire on admission, noting their sexual characteristics, and pain level, post procedure follow up was conducted every 3 months for a one-year follow up.

**Results:** Genital regenerative therapy (PRP - radiofrequency therapy) & clitoral restorative surgery combination, after female genital mutilation provided marked improvement in patient’s psycho-sexual behavior and mood. These changes were noted by an increase in confidence, self-esteem and feminine body identity. We also noted a marked improvement with this combination, regarding sexual desire, arousal, lubrication and satisfaction, with better clitoral sensitivity, orgasmic intensity, and pain reduction.

**Conclusion:** Increased education, awareness and support are an important step in lowering FGM rates globally. Genital regenerative therapies combined with, reconstructive procedures have shown promising results and should be offered and made available to all FGM victims who consult gynecology clinics in hospitals. The training of more doctors in genital regenerative, aesthetic and reconstructive techniques should also be encouraged.

**Keywords:** Female Genital Mutilation - Regenerative Therapies - Clitoral Restorative Surgery
Objective: The purpose of this study was verifying the effectiveness of the use of double bipolar radiofrequency in Synergie whit Cell Matrix in the control of urethritis and trigonitis in 20 patients with complex chronic pain syndromes of the pelvic floor.

Methods: Twenty women were analyzed and studied for inclusion in the study and treatment. These are very complex cases with no resolution with previous treatments. Previous studies were carried out, incontinence test, evaluation of pain scales, quality of life test, advanced echographic analysis such as elastography, low flow Doppler and 3D / 4D volumetric study of the urethral and vaginal area to be treated. Studies of flowmetry, cystoscopy, urethrocystography and analysis before and after with functional magnetic resonance were performed.

We used the Pulstrode catheter at the urethral level and the bipolar radiofrequency Votiva Inmode for the treatment and vaginal approach. Cell Matrix., it is the combination of plasma enriched in platelets from the patient with 2cc of low molecular weight hyaluronic acid.

Results: Fifteen (15) complex patients with severe pain above 7 on the analogue visual scale for pain decreased their pain by more than 4 points in the first 15 days after treatment. Four (4) of them a month no longer present pain and only one (1) pain was assessed in two months. The degree of satisfaction after the procedure was 100% for its clear improvement, absence of complications and improvement in quality of life.

Conclusion: 100% of patients improved in pain control, general satisfaction and improvement of quality of life. His level of frustration improved and limitations in social activities.
Dr. Feruza Gafarova

The talk will be about the use of BHRT, Peptides and pellets in antiaging medicine.

Key points of the lecture:

• History of BHRT
• BHRT vs synthetic hormones – safety profile
• Difference between compounded BHRT vs manufactured
• FDA state on BHRT
• Indications/contraindications
• Practical points on how to start BHRT with your patients
• What are peptides?
• How use of peptides can enhance your practice and improve patient’s quality of life • Peptides for weight loss and enhanced muscle building
• Peptides for enhanced sexual desire
• Safety/indications/contraindications
• Pellets
PLASTIC SURGERY
Dr. Alessandro Gennai

Recent studies of physiology of the aging face proved that the loss of volume and the aging of the tissue are the most important factors involved in facial aging.

In the light of these evidences, the autologous regenerative medicine plays a central role in the facial rejuvenation.

I standardized and published SEFFI (Superficial Enhanced Fluid Fat Injection) and in the last years I developed a new procedure aimed at performing this autologous regenerative treatment without any surgical skill, in medical facilities in an easy safe and effective way.
Autologous fat transplantation has become a well-established and frequently applied method of soft tissue augmentation for both cosmetic and reconstructive indications. There is no consensus, however, about the best fat grafting technique, nor is there reproducible data regarding its durability. The most significant drawback to autologous fat grafting remains its largely unpredictable rate of resorption.

A thorough understanding of the developmental biology and molecular regulation of adipogenesis and adipocyte survival is critical to optimizing the fat grafting technique. Consequently, numerous in vitro and in vivo studies on fat graft viability have recently been undertaken. In our presentation, we will discuss the latest advances in the basic science of adipogenesis, adipocyte viability, and its clinical application to fat grafting, arguing that the data produced by in vitro and in vivo studies done by our group produces a clear picture of the required components for successful, consistent, and durable fat transplantation.

The Stromal Enriched Lipograft (SEL) technology is described in detail and the applications in the Aesthetic and Regenerative Plastic Surgery will be discussed. With the implementation of systematic scientific approaches to the study of neo adipogenesis, we anticipate the future of autologous fat transplantation for correction of soft tissue volume loss to be extremely promising.
Regenerative neurology and neurosurgery
A complete spinal cord injury (SCI) is the complete sensory and motor loss below the site of spinal cord injury following acute or chronic destruction, compression, or ischemia of the spinal cord. It constitutes an inestimable public health issue. The most crucial phase in the pathophysiological process of SCI concerns the well-known secondary injury, which is the uncontrolled and destructive cascade occurring later with aberrant molecular signaling, inflammation, vascular changes, and secondary cellular dysfunctions. The use of our combinatorial biologics based in the combination of a unique polypeptide (Bioquantine®) and Umbilical Cord Mesenchymal Stem Cells (UCMSCs) represents one of the most important and promising and now safe and tested strategy to stimulate the neuroregeneration. This combinatorial method attract, among the other sources and types of stem cells, increased because of their ease of isolation/preservation and their properties. In this review, the therapeutic role of UCMSCs is discussed, together with their properties, application, limitations, and future perspectives. However, despite our deeper understanding of the molecular changes occurring after initial insult to the spinal cord, the cure for paralysis remains elusive. The current treatment of SCI is limited to early administration of high dose steroids to mitigate the harmful effect of cord edema that occurs after SCI and to reduce the cascade of secondary delayed SCI. An array of mesenchymal stem cells (MSCs) from various sources with novel and promising strategies are being developed to improve function after SCI. In this review, we briefly discuss the pathophysiology of spinal cord injuries and characteristics and the potential sources of UCMSCs that can be used in the treatment of SCI. Our evidence and science based method (as we previously demonstrated with a patient 2 years ago) is showing a promising alternative on the ASIA-A classification SCI. Added to it, we utilized an improved delivery method (making it ambulatory) for the in situ application of subdural UCMSCs and a unique polypeptide (Bioquantine®). Thereafter we proceeded with the intrathecal application of an advanced neurostimulator biomedical system obtaining improved results and faster clinical recovery after only 5 weeks of the started translational protocol.

**Keywords:** mesenchymal stem cells, umbilical cord derived mesenchymal stem cells, polypeptide, Bioquantine®, spinal cord injury, neurostimulator system, regenerative medicine
Dr. Himanshu Bansal

Efficacy and evidence beyond doubt in several clinical trials continues to create extraordinary anticipation that stem cells will advance the current therapeutic regimen for neurological diseases.

Bone marrow-derived (BMSCs) and adipose tissue derived (ADSCS) stem cells are very promising tool. Therapeutic angiogenesis and supply of progenitor and other multipotent stem cells along with growth factors promote structural and functional repair by changes in the neural microenvironment, endogenous neurogenesis, remyelination and rejuvenation of dormant neurons.

We present the general overview of methodology to isolate ADSC and BMAC and discuss early encouraging results of using adult stem cells to treat in persistent vegetative state, Traumatic brain and Spinal cord injury, ALS, autism and cerebral palsy for which current therapies are limited.
Dr. Zbigniew Bridzinsky

The new biological procedure/technology is based on injecting cells taken from the fat into the discs in the spine — damaged discs are one of the most common causes of chronic back pain-DDD.

The fat stored around the middle is rich in stem cells, which have the ability to develop into different types of tissue, and the theory is that injecting them into the spine will help repair the discs. Around one in four people will suffer disc problems at some time in their lives.

The discs work as shock absorbers to cushion the spine during movement, but also allow flexibility as they prevent the bones of the spine from rubbing together.

Discs have a tough outer layer but a moist, “gel-like” middle. After the age of 30 or so, the outer hard casing becomes stiff and more likely to crack, and the gel-like inner section starts to lose some of its water content.

The discs continue to degenerate, which means they provide less cushioning for the spine and also are more prone to pushing out of position or herniating. This can put pressure on nerves in the back, causing pain in the back, arms or legs.

Painkillers and physiotherapy can control discomfort. There are surgical options, too, such as fusing the discs together or replacing problem discs.

The new treatment is different, as it’s designed to repair any damage and protect against future degeneration.
When researchers before FDA/CE approval tested their theory on animals, they found that the height of the back discs improved by 26 per cent compared with those injected with a placebo.

It involves first taking fat from the patient’s abdomen using liposuction. This can be done under local anesthetic. Around 100 milliliters (a fifth of a pint) of fat is removed.

Until recently fat like this was discarded as surgical waste, but it is now known to contain many types of cells, including stem cells.

These adult stem cells are known as progenitor cells, which means they do nothing until activated by tissue injury.

The theory behind this new treatment is that the stem cells will be attracted to areas of damage and start repairing them.

Stem cells can be obtained from bone marrow, too, but extracting them involves an uncomfortable procedure which yields only 5,000 to 60,000 cells.

A 20-minute liposuction session from the abdomen can harvest 40 million cells.

The stem cells are extracted from the fat in a laboratory and can then be injected into the damaged discs.

We found that the height of the discs improved by 26 per cent compared with those injected with a placebo.

In addition, the water content of the inner section of the disc improved.

A higher water content helps keep the gel-like middle moist and better at cushioning the spine from damage.
Spinal cord injury is an acute neurodegenerative disorder caused by traumatic damage of the spinal cord. This complexity suggests that multi-therapeutic approaches, rather than any single treatment, might be more effective. Encouraging preclinical results indicate that stem cell-based treatments may improve the disease outcome due to their multi-therapeutic ability. We strongly believe that complete characterization of the primo-vascular system will fully confirm the existence of this vast, distinct vascular system, which will soon create a new standard in medicine.

Stem cell application, fascial approach and impact on the primo-vascular system are currently considered one of the most promising approaches. The highest potential impact is predictable on osteopathic manipulative medicine, pain management, tissue regeneration, organ reconstruction, diabetes, and cancer treatment. Timely access to expert management in the acute phase of traumatic spinal cord injuries is important to confine the secondary injury and is largely critical for the final nerve recovery results.

Keywords: Spinal cord injuries, stem cells, primo-vascular system
Regenerative Urology
Erectile Dysfunction is a common problem. It affects almost 50% of men over the age of 40 to a certain degree. The etiology can be different but corporeal dysfunction is one of the more common causes due to aging of the corpora cavernosa and smooth muscle dysfunction as well as endothelial dysfunction.

Several regenerative therapies have been suggested and tried to treat this condition, with various results. Shockwave therapy, platelet rich plasma and Stem cell therapies are among the most recently explored therapies. Of all these three treatments, Platelet rich plasma seem to be superior in our experience and others in terms of results and side effects.

We hereby discuss the results of this treatment which was administered to more than 1000 patients at our institution over the last 6 years and the material and methods involved.
M.D. Abbas Khadra

Introduction

Erectile dysfunction is one of the most common causes of morbidity in male patients, with a prevalence of 50-60% in men aged 40-70 years. The main cause involved in the pathophysiology of erectile dysfunction is vascular damage related to endothelial and neuronal injury. In the past decades, great interest has been shown in the development of new therapies for erectile dysfunction, the most important of which is stem cell therapy. Stem cell therapy has generated promising results in numerous preclinical trials in animal models, which has led to trials in humans. The interest in stem cell therapy is justified by their capability to differentiate into specific damaged tissues, including endothelium and nervous tissue, and induction of host own cell proliferation. Recent study treating erectile dysfunction in post radical prostatectomy for prostate cancer with fat derived stem cells, showed a significant improvement in erectile function (Haahr et al, 2017). Platelet Rich Plasma (PRP) has been injected into the corpora cavernosa (“P”Shot) for the treatment of erectile dysfunction in various clinics across the world but the benefits not assessed in clinical trials. In this small observational trial we assess the effects of injecting PRP with cord derived stem cells in the treatment of erectile dysfunction.

Methods

200 patients with erectile dysfunction with history of smoking and some diabetes too. Age range was 42-70. All patients were not taking any treatment for erectile dysfunction. All had base line penile dopplers done and 4 months after treatment. Patients had a mix of PRP with Cord stem cells injected into the corpora carvernosa at interval of 1 month, total of 3 sessions. After 4 months of the initial injection they were all reassessed with a penile Doppler.

Results

All patients showed improvement in their Doppler results. Both right and left cavernosal arterial flow was measured. Prior to treatment the average flow in the weaker side was 0.09 m/s (range 0.01 – 0.17 m/s) and post treatment it improved to 0.27 m/s (range of 0.09 – 0.41 m/s) a 3 fold improvement. All patients reported improvement in their sexual performance.

Conclusion

Stem cell application is a promising area of research in regenerative medicine, with the potential to treat, prevent, and cure disease. In recent years, the number of studies focusing on Stem Cells for the treatment of erectile dysfunction and other sexual dysfunctions has increased significantly. This small trial demonstrated that a combination of PRP with cord stem cells improved the cavernosal arterial flow significantly and resulted in better erectile function.
UAE EXPERIENCE IN REGENERATIVE MEDICINE

SPECIAL PANEL
Mohammed Al-Jumaily, M.D., DAABRM, FRCS (SN), M. Sc, Ph.D.

The Regenerative Clinic, Harley Street Specialty Hospital, London, U.K.

Introduction: The regenerative, anti-inflammatory, and immunomodulatory characteristics of stem cells have made them strong candidates to play a role in the treatment of various neurological illnesses. The potential candidates include mesenchymal stem cells (MSC), neural stem cells (NSCs), embryonic stem cells (ESCs), and induced pluripotent stem (iPS) cells. Applications in neurological diseases include:

1. Cerebrovascular Accidents (CVAs) or Strokes: MSCs are considered to be the best alternative for the treatment of CVAs. While the majority of the pre-clinical and clinical studies demonstrated statistically significant effects, the clinical significance of these findings remains unclear.

2. Amyotrophic Lateral Sclerosis (ALS): Intravenous injection of MSCs showed delayed disease progression compared to untreated mice. Human MSC trial, injected into the muscle or the spinal canal, demonstrated that the treatment was safe and well-tolerated, and slowed the rate of disease progression.

3. Alzheimer’s Disease: MSCs may have an anti-beta amyloid activity, Transplanted ESC derived NSCs into the brains of Alzheimer’s mice caused a dramatic reduction in cholinergic deficits and short-term memory disruption. Injections of human umbilical cord blood derived MSCs into human brain did not slow cognitive decline over the 24 months of follow-up.

4. Parkinson’s Disease: Transplanting tyrosine hydroxylase gene-modified neural stem cells into hemi-parkinsonian monkeys leads to functional restoration. Human iPS cells could generate functional dopamine neurons in rat models. The Safety and Efficacy Study of Human ESC-derived Neural Precursor Cells in the Treatment of Parkinson’s Disease is still in progress.

5. Autism Spectrum Disorder (ASD): Autologous bone marrow derived mononuclear cells (BM-MNC) transplantation intrathecally followed by behavioral therapy resulted in improvement. Cord blood MNC and Umbilical cord MSCs were transplanted intravenously and/or intrathecally reported significant improvements. ASD children treated with intravenous fetal hemopoietic SCs displayed improved eye contact, appetite, and socialization.

6. Spinal Cord Injury: Adipose derived MSCs were better able to tolerate these stress conditions than BM-MSCs when transplanted into the spinal cord injury region in vivo. However, the motor function was equally improved following moderate spinal cord injury in both groups. Recently, there has been a significant functional improvement seen after severe spinal cord injuries in the Celltop study at the Mayo clinic. In this trial, 100 million autologous AD-MSC were injected 11 months after the injury.

In summary, there many types of stem cell treatments for neurological conditions with variable outcomes: mostly favourable with no significant adverse effects.
Prolotherapy.
Theoretical concepts and current evidence

Dr. Suad Trebinjac

Prolo (abbreviation of proliferation) is injection-based treatment of chronic musculoskeletal conditions. Different irritant substances are injected to tendons, ligaments or joints to restart and maintain natural healing process. The most common prolotherapy ingredient is hyperosmolar dextrose, sugar dissolved in water, usually combined with Lidocaine and Sodium chloride. The percentage of dextrose solution range from 5% to 25%. Higher concentration is used for intraarticular injections.

There is accumulating evidence that dextrose prolotherapy is safe and efficient alternative therapeutic option. Systematic review studies confirmed significant improvement in management of knee osteoarthritis. Further research should be focused on standardization of treatment protocol. More pre-clinical and clinical studies are needed to verify high safety profile and long term efficacy of dextrose prolotherapy.
Ms. Servane Collette

Physicians' Career management goes through several aspects such as clinical skills development, personal growth, financial growth and community engagement.

This talk will discuss the various projects, channels and methodologies available to physicians in order to grow within their own respective field or to branch out into new areas of healthcare and business development.
VENUE CENTER – HYDE HOTEL DUBAI

Hyde Hotel Dubai is situated in Dubai, 1.5 km from The Dubai Fountain and 1.7 km from Dubai Mall. The property is located 1.8 km from Burj Khalifa and 3.8 km from City Walk Mall. Attractions in the area include Dubai World Trade Centre, 5 km away, or Grand Mosque, set 9 km from the property.

Burj Al Arab Tower is 11 km from the hotel. The nearest airport is Dubai International Airport, 11 km from Hyde Hotel Dubai.
BACKGROUND

As part of the world-leading Accor group, the first Hyde Hotel Dubai is slated to open in Q4 of 2021, in the vicinity of Business Bay canal and promenade and close to the iconic Dubai Mall. Becoming the first Hyde hotel outside of the United States, Hyde Hotel Dubai marks the fifth opening under the Hyde brand.

LOCATION

The five-star hotel is set within Business Bay’s commercial, fashionable, business and lifestyle district with nearby attractions and destinations include the Burj Khalifa, Downtown Burj Khalifa and Downtown Dubai. Located in Business Bay, Hyde Hotel Dubai overlooks the Dubai Canal and Promenade along with a view of Dubai’s skyline. Hyde Hotel Dubai is also a 30-minute walk from Dubai’s International Airport. Valet parking is available as well easy access to taxis and chauffeured Limousine service.

NEARBY:

- Dubai International Airport (10 minutes)
- Jumeirah (9 minutes)
- Dubai Mall and Bay Khalifa (5 minutes)
- Downtown Dubai (5 minutes)
- JLT (2 minutes)
- JLT Metro (20 minutes)
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GLOBAL REGENERATIVE CONGRESS 2022

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