BIGGEST Aesthetic Medicine EXPO in Asia

SWAM Seminar & Workshop in Aesthetic Medicine

PERDAWERI

Certificate

This is to certify that

DR. Dr. Ago Halim MARS, SpKK

has attended:

7th International SWAM Anti Aging Exhibition 2016

Defeating Aging

as:

SPEAKER

December 2nd - 4th 2016

Indonesia Convention Exhibition, BSD City, Tangerang - Indonesia

Accreditation : 00775/PB/A.4/11/2016

Participant : 15 SKP IDI Speaker : 12 SKP IDI Moderator : 4 SKP IDI Organizing Committee : 2 SKP IDI

Prof. DR. Dr. Abdul Razak Thaha, MSC. SpGK
Chairman of Perdaweri

Dr. Teguh Tanuwidjaja, M. Biomed (AAM)
Main Commissiner

SWAM
Seminar & Workshop
in Aesthetic Medicine

PERDAWERI

7th International SWAM Anti Aging Exhibition 2016

Defeating Aging

Speaker

DR. Dr. Ago Harlim MARS., SpKK

December 2nd - 4th 2016
Indonesia Convention Exhibition,
BSD City, Tangerang - Indonesia

Organized by:

PT.Perdesti
Global
Medicom.

International SWAM – Anti-Aging Exhibition 2016

Indonesia Convention Exhibition (ICE) BSD – Tangerang, December 2nd – 4th, 2016

No : 187/PGM/X/2016
Issue : Speaker invitation

To the Honorable
DR. Dr. Ago Harlim MARS., SpKK
in Indonesia

With Regards,

Through this letter, We are as the Organizing Committee of **INTERNATIONAL SWAM – ANTI AGING EXHIBITION 2016, at Indonesia Convention Exhibition (ICE) BSD – Tangerang, Indonesia,** pleads willingness **DR. Dr. Ago Harlim MARS., SpKK,** as a Speaker in our event on 2nd - 4th December, 2016, as follows :

Day & Date	: Sunday, 4th December, 2016
Time	: 10.30 - 11.15 WIB
Topic 1	: Adipose Stemcell for Aesthetic
Place	: Classroom A ,Nusantara Hall 2

Day & Date	: Sunday, 4th December, 2016
Time	: 15.45 - 16.30 WIB
Topic 1	: Growth Factor make your Skin Regeneration
Place	: Classroom D, Garuda 8 ab

We would like you to fill the Speaker Form, and also send your lecture matter and curriculum vitae to our email address : anne_pgm@yahoo.com before November 12, 2016.
We hope Your Honor may provide the time to give a lecture, at our Seminar.
Thank you for your kindness and attention.

Jakarta, 30 November 2016
Sincerely,

(dr. Teguh Tanuwidjaja, M. Biomed AAM)
Chairman of the Organizing Committee

Nurcholis

Inbox - Yahoo! 30 November 2016 09.50

FW: Letter Speaker of International SWAM 2016

To: Dr harlim xl xl xl, Jessica Angelina

Kepada Yth.
DR.dr.Ago Harlim MARS., SpKK

Berikut ini kami lampirkan undangan untuk DR.dr.Ago Harlim MARS., SpKK. Sebagai pembicara pada acara SWAM INTERNATIONAL – ANTI AGING EXHIBITION 2016 yang berlangsung di Indonesia Convention Exhibition (ICE) BSD – Tangerang, sebagai berikut :

== Hari & Tanggal : Minggu, 4 Desember 2016
== Waktu : 15.45 – 16.30 WIBB
== Tempat : Classroom D

Terimakasih banyak atas perhatian dan kerjasamanya yang baik.

Best regards,
Nurcholis Kurniawan

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PDF

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Adipose Stem cell for Aesthetic

Ago Harlim
Universitas Kristen Indonesia

Introduction : Stem cells are cell that can differentiate into any cells. Stem cells can be used for therapy. Initially stem cells only used as therapy for diseases, in newest research, stem cells also used as anti aging therapy.
Methods : Stem cell was taken from liposuction fat, processed with centrifugation, incubation, and washed with collagenase to gain the stem cell. Stem cell given by intravenous injection for anti aging therapy.
Result : 2 weeks after stem cell therapy, the face looks brightened, reduced wrinkles, better skin texture, stamina improved, and improvement of the Melasma. Fat transfer with stem cell therapy more available than usual technique
Discussion : Stem cell therapy basically works in injury places. We used intravenous injection delivery methods so the stem cell works all over the body to heal the injury places, including degradated collagen caused by aging. Injection of stem cell significantly increased collagen synthesis and long life of fat transfer.
Conclusion: Stem cell can be used for aesthetic therapy

Key words: *intravenous, stem cell, anti aging*

Adipose Stem cell for Aesthetic

Ago Harlim
Universitas Kristen Indonesia

Stem Cell Is A cell that has an ability to continuously divide and differentiate (develop) into various other kinds of cell or tissues. All cells in the body come from stem cells
Stem cells can Self renew to make more stem cells and Differentiate into a specialized cell type. As individuals age, the skin undergoes changes, such as irregular pigmentation, thinning and loss of elasticity, that are due to both genetic and environmental factors. These changes may worsen, progressing to precancerous and cancerous diseases. Various medical treatments and topical cosmeceuticals have been used to treat some symptoms of photoaging, however, the results have been less than satisfactory. Mesenchymal stem cells within the stromal-vascular fraction of subcutaneous adipose tissue, adipose-derived stem cells (ADSCs), display multi-lineage developmental plasticity and secrete various growth factors that control and manage the damaged neighboring cells. Recently, the production and secretion of growth factors has been reported as an essential function of ADSCs, and diverse regenerative effects of ADSCs have been demonstrated in the skin. For example, conditioned medium from ADSCs (ADSC-CM) stimulated both collagen synthesis and migration of dermal fibroblasts, which improved the wrinkling and accelerated wound healing in animal models. ADSC-CM also inhibited melanogenesis in B16 melanoma cells, and protected dermal fibroblasts from oxidative stress induced by chemicals and UVB irradiation. Therefore, ADSCs and soluble factors show promise for the treatment of photoaging, and this review introduces recent research developments of the ADSCs and ADSC-derived secretory factors regarding this issue.

Stem cell Potency is the ability to differentiate into all possible cell types. Examples are the zygote formed at egg fertilization and the first few cells that result from the division of the zygote.

- Pluripotent
  - The ability to differentiate into almost all cell types.
  - Examples include embryonic stem cells and cells that are derived from the mesoderm, endoderm, and ectoderm germ layers that are formed in the beginning stages of embryonic stem cell differentiation.
- Multipotent
  - The ability to differentiate into a closely related family of cells.
  - Examples include hematopoietic (adult) stem cells that can become red and white blood cells or platelets.
- Oligopotent
  - The ability to differentiate into a few cells.
  - Examples include (adult) lymphoid or myeloid stem cells.
- Unipotent
  - The ability to only produce cells of their own type, but have the property of self-renewal required to be labeled a stem cell.

Examples include (adult) muscle stem cells

History Adult Stem Cell

It is start about 60 years ago. They found Bone marrow contains at least 2 kinds of stem cells, and then they found hemopoietic stem cell and stromal stem cell
Hematopoeitic stem cells is stem cell forms all types of blood cells in the body and Stromal stem cells is from mesenchymal stem cells which can generate bone, cartilage and fat cells – support the formation of blood and fibrous connective tissue.
In 960, most scientists believed adult brain could not generate new nerve cells
In 1990s, scientists agreed that adult brain does contain stem cells that are able to generate the brain's three major cell types : astrocytes, oligodendrocytes and neurons / nerve cells

Adult Stem Cell can be divided by 3 kind of stem cell source:
Hematopoietic stem cells from Red blood cells, B lymphocytes, T lymphocytes, natural killer cells, neutrophils, basophils, eosinophils, monocytes, and macrophages.
Mesenchymal stem cells from Bone cells (osteoblasts and osteocytes), cartilage cells (chondrocytes), fat cells (adipocytes), and stromal cells that support blood formation.
Neural stem cells from Nerve cells (neurons) and non-neuronal cells—astrocytes and oligodendrocytes

Previous reports have suggested that the beneficial effects of bone marrow-derived MSC-based therapy, such as angiogene sis, anti-inflammation, and antiapoptosis, are largely mediated by the trophic actions of cytokines and growth factors secreted by the bone marrow-derived MSCs rather than by the differentiation of MSCs into local tissue cell types. Similarly for ASCs, it has been shown that the beneficial impact on different organs/tissues within the human body may be due to soluble factors produced by ASCs rather than their differentiation capability toward different mature line- ages. The ASCs secretome has the potential to be a powerful tool for use in future approaches to develop cell-/tis- sue-based therapeutics for regenerative medicine. A number of papers have described the secretory profiles of preadipocytes, ASCs, or adipose tissue, which were determined using enzyme-linked immunosorbent assays or related techniques. Analyses of the soluble factors released from human ASCs have revealed that cultured ASCs, at relatively early passages, secrete hepatocyte growth factor (HGF), vascular endothelial growth factor (VEGF), transforming growth factor-b, insulin-like growth factor (IGF)-1, basic fibroblast growth factor (bFGF), granulocyte-macrophage colony-stimulating factor, tumor necrosis factor (TNF)-a, interleukin-6, 7, 8, and 11, adiponectin, angiotensin, cathepsin D, pentraxin, pregnancy zone protein, retinol-binding protein, and CXCL12.

The proliferation capacity of ASCs seems to be greater than that of bone marrow-derived MSCs. Previous reports have shown that the doubling times of ASCs during the logarithmic phase of growth range from 40 to 120 hours. are influenced by donor age, type (white or brown adipose tissue) and location (subcutaneous or visceral) of the adipose tissue, the harvesting procedure, culture conditions, plating density and media formulations [35, 56]. The younger the donor, the greater the proliferation and cell adhesion of the ASCs, while cells gradually lose their proliferative capacity with passaging. Based on b-galactosidase activity, senescence in ASCs is similar to that in bone marrow-derived MSCs.

ASCs are generally considered to be stable throughout long-term culture, as it was reported that even ASCs that had passed more than 100 population doublings had a normal dip- loid karyotype. On the other hand, one report suggests that human ASCs undergo malignant transformation when passaged for more than 4 months; although recent reports show that spontaneous transformation of MSCs may apparently be due to cross-contamination with

malignant cell lines such as fibrosarcoma and osteosarcoma. Since the issue of spontaneous ASCs transformation is still controversial, further experiments and discussion are required

Advantages of Adult Stem Cell

- Somewhat specialized – inducement maybe simpler
- **Not immunogenic** – recipients who receive the products of their own stem cells will not experience immune rejection
- Relative ease of procurement – some adult stem cells are **easy to harvest** (skin, muscle, marrow, fat)
- **Not tumorigenic** – tend not to form tumors
- **No harm** done to the donor

New Treatments Mesenchymal Stem Cell is Bone and cartilage repair, Heart and blood vessel repair, Inflammatory and Autoimmune diseases, Aesthetic and anti aging.

The benefit Adipose Stem Cell Therapy:

- **Autologous**
- Small sample of adipose tissue (fat) is removed from above the superior iliac spine or abdomen under a local anesthesia
- Much easier and less invasive than performing a bone marrow extraction
- Adipose tissue contains much larger volumes of mesenchymal stem cells than does bone marrow

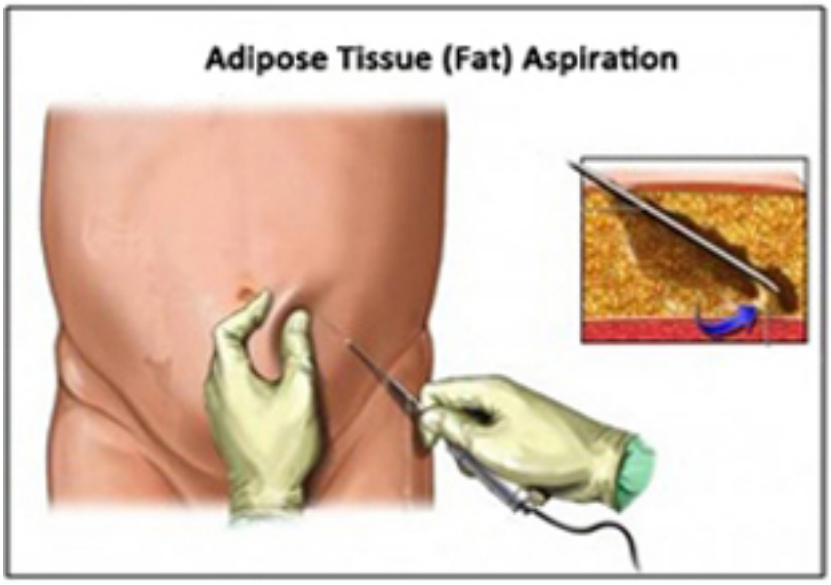
Adipose tissue stem cells

Adipose tissue stem cells (ASCs) are considered as a type of mesenchymal stem cell (MSC) in stromal vascular fractions (SVF) which are isolated from fat tissues enzymatically. Thus, ASCs express the typical surface markers of stem cells and have potentials to differentiate into multiple lineages as MSCs, including endothelial, adipogenic, osteogenic, chondrogenic, and myogenic cell lines. This has previously been reported to be the result of a cellular milieu of various soluble factors produced by the ASCs themselves.T his secretory profile of ASCs is regulated by exposure to different agents.

With the prominent role the cellular environment of ASCs plays, in vitro studies have focused on manipulating the culture medium of the ASCs in an effort to direct differentiation patterns in a lineage-specific pattern.

However, fluorescence-activated cell sorting (FACS) shows the different expressed surface marker profile between MSCs and ASCs. In fact, ASCs are a heterogeneous population consisting of adipose tissue-derived stromal cells and MSCs. In SVFs from adipose tissue and bone marrow, Y. Jang et al. identified six major cell types; while adipose tissue contains a significant number of MSCs and ASCs together with a much lower number of leukocyte than those in the bone marrow. In-vitro, ASCs can be differentiated into osteoblasts, chondroblasts, adipocytes, myocytes, and cardiomyocytes in suitable conditions. Adipose tissue consists of 100–500 folds higher number of stem cells compared to bone marrow, which makes ASCs an attractive source for human usage. ASCs show therapeutic impacts on angiogenesis, wound healing, and the immune regulatory system. Since the first isolation and classification of ASCs

in 2001, the studies about ASCs human trials have been increasing year by year starting from 2007 and reaching its peak in 2015 with up to 187 clinical trials using adipose stem cells. There are six trials registered in clinicaltrial.gov in the first quarter of 2019. Most of the studies have been conducted in East Asia, Europe, North America and United States. Phase I and phase II for treatment of skeletal diseases, gastrointestinal diseases, skin diseases, nervous disorders, autoimmune diseases, diabetes mellitus, lung and heart diseases. In general, ASCs can be isolated from the collected adipose tissues in patients and directly injected into the wounds, bloodstream, or encapsulated in biomaterials and implanted in the wounds. Many investigations showed ASCs can increase the healing rate and decrease healing time both in-vitro and in-vivo. ASCs can directly differentiate into specific cell lineages such as keratinocytes, fibroblast-like cells, and endothelial cells, together with the release of growth factors and cytokines, all that promote angiogenesis, development, migration of fibroblasts, and production of fibronectin and collagen. These results are consistent in 14 clinical trials data. Because of that ASC is the best for skin rejuvenation or antiaging.



Procedure Adipose Stem Cells Therapy

- Simple Blood test
- Tumor marker

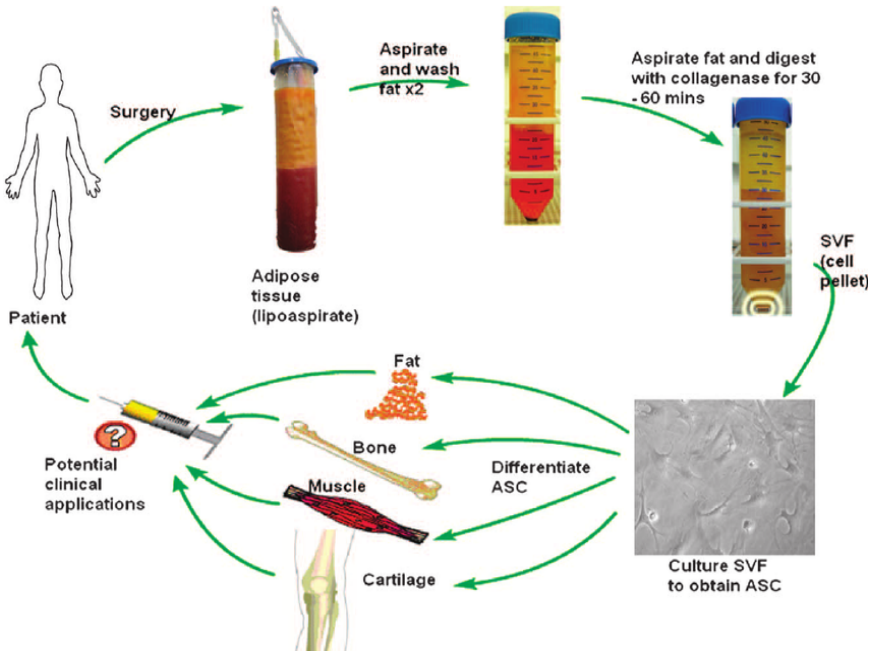
AFP, PSA, Ca199, HCG

Processes in Isolation of ASCs

The isolation processes of ASCs have been developed and optimized for 20 years, which is more suitable for therapeutic application. Zuk et al. first isolated ASCs in 2001 by using collagenase type II to digest adipose tissues and washing with NH4Cl several times which was summarized in This enzymatic isolation process is most useful and effective for clinical use. In 2017, Raposio et al. developed the standard protocol for isolation of ASCs that showed the maximum in the number of stem cells obtained from liposuction (9.06×10^5 cells per 100mL of adipose tissue) with 99% cell vitality. This process was performed in a closed circulation with minimum contamination and minimal time consumption, that guarantees safety and

efficiency of stem cells for clinical uses. Besides the enzymatic method, adipose tissue can be digested by the non-enzymatic method. The non-enzymatic method is proposed as an economical method and effective for fat grafting in skin diseases. However, in term of the number of collected ASCs, he enzymatic isolation method is more effective than the non-enzymatic process, 25.9% and 5%, respectively.

ASCs are isolated from SVFs, a group of many cell types. SVF cells have different characteristics as well as surface markers. Classification ASCs may be based on specific markers, which were screened by flow cytometry. Moreover, Zuk and his groups demonstrated that it is impossible to separate SVFs population by single marker. The standard specific surface markers of surface markers to classify SVFs.
ASCs are still developing. Researchers have been used different surface markers to classify SVFs. However, the isolation method can be done by the closed and automatic system which reduces clinical intervention and prevents any contamination. In 2013, Joel A. Aronowitz and Joshua D.I. Ellenhorn evaluated 4 semi-closed isolation systems. The authors reported the Celution System with automatic procedure can obtain the highest number of viable cells, ASCs with the lowest number of residual enzymes compared to manual systems as Multi Station, Lipokit, and Cha-Station. In this presentation, I used Lipokit (video)

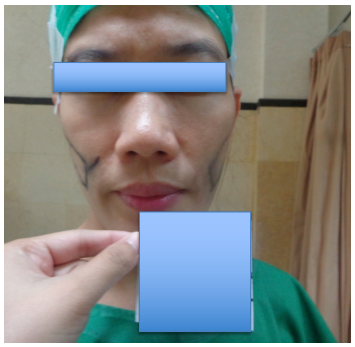


Benefit of Autologous Fat Transfer With SVF

- Improved the survival of fat cells
- The adipose tissue is less absorbed
- Formation of greater numbers of new blood vessels
- Increased the fat graft viability
- The augmentation effect were superior then the conventional

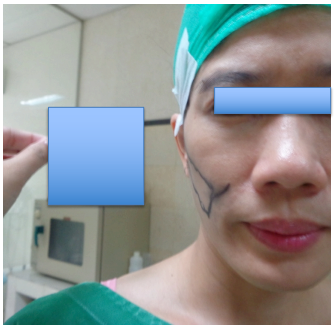
Fat transfer

after

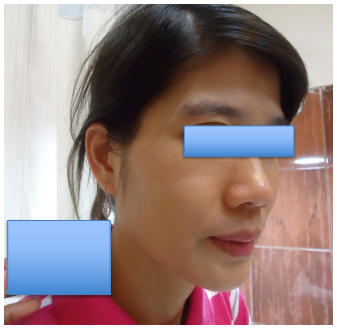


Fat transfer

Before

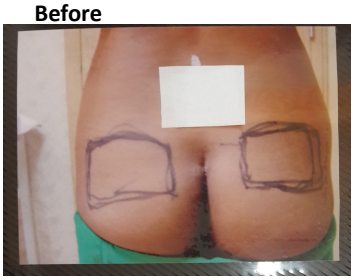


After

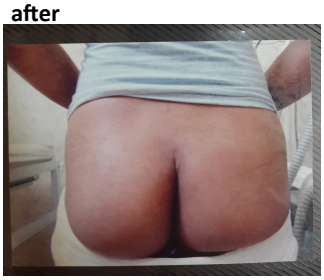


Fat transfer

Before

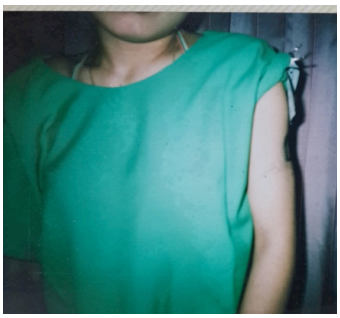


after



Fat Transfer

before



after

3x SVF + 2x PRP (2 Weeks Apart)

2 mo before treatment
6 mo after xenogeneic SC (sheep)

2 wk after 1st treatment

6 wk after 1st treatment

Courtesy of : Karina F. Moegni

3x SVF + 2x PRP (2 Weeks Apart)

Before

6 week after 1st treatment

Courtesy of :
Karina F.
Moegni

Conclusion: Stem cell can be used as anti aging therapy

Reference:

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