

Volume 15 | Number 1

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NOTICE OF NEW ADDRESS

ISAPS has moved administration to virtual offices.

Please make a note of our new address:

International Society of Aesthetic Plastic Surgery (ISAPS)

10 Benning Street, Suite 160 #264

West Lebanon, New Hampshire 03784-3402 USA

The telephone number remains the same:

+1-603-643-2325

MESSAGE FROM

the Editor-in-Chief



ARTURO RAMIREZ MONTAÑANA - MEXICO Editor-in-Chief, ISAPS News

Dear Colleagues,

Welcome to the first issue of volume 15 of *ISAPS News*. I hope that this issue finds you, your families, and your staff in good health.

As some of you already know, we have a brand-new editorial team working on *ISAPS News*. Our goal is to introduce a new philosophy to the newsletter, making it more like a magazine, by including cultural aspects, personal interests of members, and lifestyle sections.

This quarter, the topic is **Breast Reduction:** How I Do It, and we have received a great variety of articles, each of which cover a different aspect of this technically challenging procedure. We have presented a truly global perspective on this topic, as well as standout articles. One of these is by Dr. Elizabeth Hall-Findlay (Canada) and Dr. Gustavo Jimenez (Mexico), who deliver a highly practical article based on their extensive experience.

Our next issue will look at **Facial Fat Transfer: How I Do It** and we would love to see articles covering the full range of facial techniques, including implants, fat grafting and revision. If you are interested in submitting an article on this topic, please send your submission to isapsnews@isaps.org by April 15.

APPLYING DARWIN TO CORONAVIRUS: KEEPING OUR PRACTICES FIT

"Few thinkers have had quite the same impact as Charles Darwin. His theory of evolution was so powerful and compelling that it became the new orthodoxy, affecting how we think about many aspects of our lives. Not least of these influences has been on the way we do business." Morgan Witzel

We continue to struggle with the COVID-19 pandemic worldwide and will likely continue to feel its effects. In this new age, many of the old rules of business no longer apply, and traditional approaches to attracting customers do not work. There has been a fundamental shift in how organizations operate, and we must be innovative and create new and exciting methods for getting new patients.

SURVIVAL OF THE FITTEST

"It is not the strongest species that survive, nor the most intelligent, but the ones most responsive to change."

Leon C. Megginson

What does 'survival of the fittest' mean in the COVID-19 pandemic? Businesses and industries are approaching this differently and achieving various results, but as we are seeing first-hand, businesses must evolve to thrive and survive. A business must have a critical mix of diagnostic and matchmaking skills. They must be able to read their internal capabilities and the wants and needs of the external marketplace, and then align these two. Even now, during this crisis, the possibilities for change are out there, and we must take advantage of them. Remember, those who adapt the fastest prosper!

INNOVATION IS THE BEST WAY OUT OF A CRISIS

In the recent past, we have seen companies who failed to adapt. One example of this is Blockbuster, the internationally known video rental service. The video rental business was hugely profitable from day one, but Blockbuster faced their biggest challenge to date. You see, the environment was changing and so were customers' needs. They no longer wanted to go

to the store and rent a tape: instead, they wanted to watch TV shows and movies on demand from the comfort of their own homes.

Blockbuster had a choice: adapt or fail. They could have moved away from physical DVD rentals to digital and mail-order video delivery. However, their attempts to change were too little, too late, and the company began experiencing huge losses. Some figures suggest that by the end of 2009, the company's debt had climbed to as high as \$856 million. Netflix had come along in 1999 and done exactly what Blockbuster had failed to do. After starting out as a mail delivery video service, Netflix continued to adapt and eventually moved entirely to the digital domain, where it is now the go-to provider of home entertainment in the form of watching your favorite shows on demand.

This example clearly illustrates how Digital Darwinism works – if your business fails to adapt to the new trends, you will be on a path to failure.

APPLYING DARWIN TO OUR PRACTICE

Our field of business is no different from the rest and follows the same rule - adapt and thrive, or fail to do so and become obsolete. If we want to survive with a healthy practice, we must do the following:

- Telemedicine we need to adapt to modern telemedicine tools, such as virtual consultations and video conferencing platforms
- Nonsurgical > surgical surgical procedures are less common at the moment due to restrictions on nonessential procedures and the economic impact of COVID-19 on patients, so we need to focus on the procedures we can offer patients

- Spend wisely during these times, we need to make sure
 we spend money exclusively when necessary, to keep
 money in our pockets until things are back to normal
- Go virtual connect with your patients, with ISAPS, and with events virtually, and don't forego further education just because it's not possible in person

APPLYING DARWIN TO ISAPS

As a society, we have already implemented many techniques designed to keep us constantly evolving and adapting. We regularly elect a new Board of Directors to ensure that we get fresh ideas and new responses to issues we may face. And for the first time ever, we have implemented an electronic voting system, allowing for members to vote without having to meet in-person, which is currently not possible.

In this new era of travel bans and event restrictions, we have continued our focus on aesthetic education and not only replaced in person events with virtual ones, but also created entirely new digital events for our members around the world to take part in. Alongside our monthly Master Class webinar series, ISAPS has started a brand-new Residents Series and has planned the first-of-its-kind 48-hour worldwide aesthetic event, ISAPS WORLD, for this month.

Darwin's theory of survival of the fittest is still relevant today. For ourselves and for our practice, our philosophy must always be to adapt and evolve to survive. With that in mind, I am excited to take on ISAPS News along with my new editorial team and help it evolve and grow.

Be safe and be well.

Arturo Ramirez Montañana, MD, Editor-in-Chief

MESSAGE FROM

the ISAPS News Co-Chair



FABIAN CORTIÑAS - ARGENTINA Co-Chair, ISAPS News

INTRODUCING THE 'NEW'SLETTER

Dear Colleagues and Friends,

Anyone who has the chance to experience our upcoming virtual event, ISAPS WORLD, on March 27-28 is bound to be attracted to the charming scenario that is ISAPS: a multicultural society that is made up of over 4,000 members and includes more than 100 countries and over a dozen languages, comprises almost all time zones, and shares one common passion that links us all: our devotion to Aesthetics.

The place we all meet every three months is our newsletter, *ISAPS News*; here we share what we do, our wins and losses, the latest plastic surgery developments, and anything related to the evolution of our society.

WE ARE STANDING ON THE SHOULDERS OF GIANTS

Our predecessors have done a great job building up the newsletter. As part of the new editorial team, we are looking forward to bringing our own perspective to the newsletter and to evolving its DNA a little bit more. I am excited to introduce some of the new sections that will be incorporated in future issues of ISAPS News.

HOW I DO IT

Through the newsletter, our members have shared their "Global Perspectives" on aesthetic procedures. This has been an outstanding experience that has shown how the same topic can be treated differently throughout the world. Moving forward,

these "Global Perspectives" on a topic will transition into "How I Do It." As an international society, our members' unique take on a procedure already provides a global perspective. With "How I Do It," we hope to open the floor to anyone who wants to teach their personal technique. We invite you to submit more informal articles highlighting your personal technique for the selected topic in a collegial atmosphere. "How I Do It" articles will focus on short descriptions of techniques using pictures and may even include a link to a video.

OUR DNA

Future issues of ISAPS News will include new sections designed to showcase our multicultural background. By adding these new categories, we hope to make our newsletter attractive not only to us but also to the public, to future patients, and to our future members.

ISAPS Gourmet will feature short articles from members with quick recipes and descriptions about local food. This section can also include restaurant recommendations in your area and tips to improve our eating experience around the world.

ISAPS Culture will give our members the opportunity to share the iconic cultural aspects of their countries, highlighting local art exhibitions, renowned museums, and regional history from the individual viewpoints of our members.

ISAPS Health will include members' takes on their favorite sports, sports recommendations, as well as anything related to wellness and fitness, from meditation to dietary guidelines. This section should be informative for both our colleagues and our patients.

ISAPS Travel will provide travelers with a place to offer their personal travel tips to readers. Here, members can describe the hidden secret gems in their countries and offer local tips for their region.

The **Residents Corner** for ISAPS residents is going to become more comprehensive and will serve as a place for residents to share their stories, talk about their dreams and latest projects, highlight certain programs and events, and call for cooperative work.

ISAPS has more than 4,500 members in 107 countries and we each have a unique perspective to share with each other.

We want this newsletter to be the place where we can all meet and share our unique experiences and present attractive information about our countries, ourselves, and of course, our practice.

Whether you are a resident, a mentor, a new member, or a long-time member of the ISAPS family, we invite you to participate on this journey as we evolve the newsletter and help it grow. If you are interested in submitting an article to ISAPS News, please contact isapsnews@isaps.org for details.

Thank you for your support - we are excited to get started on this new adventure with you!

Best regards,

Fabian Cortiñas, MD, ISAPS News Co-Chair



MESSAGE FROM the ISAPS President

Dear ISAPS members, friends, and colleagues,

I am hopeful that 2021 will be a better year for all of us and I am looking forward to seeing you all again in person as soon as it is safe to do so. In the meantime, we can connect digitally at virtual events like ISAPS WORLD, which I am excited to be a part of in just two weeks. It is important to remember that we are all united as part of the ISAPS family, wherever we each may be.

Here at ISAPS, we have been busy in the first quarter of 2021 preparing new and exciting things to come for you!

ISAPS NEWS

I am pleased to usher in a new editorial team for our quarterly newsletter, ISAPS News. After many years of dedication and great work, Managing Editor Catherine Foss and Editor-in-Chief Dr. Nina Naidu (USA) have handed over the newsletter to a new team. Drs. Arturo Ramirez-Montañana (Mexico) and Fabian Cortiñas (Argentina) have taken the reins as Editor-in-Chief and ISAPS News Co-Chair, respectively. They are excited to bring their own perspectives and new ideas to the newsletter and I look forward to seeing how the newsletter evolves. A big thank you to Catherine Foss and Nina Naidu for their hard work in the past.

ISAPS WORLD

Our first non-stop virtual conference, <u>ISAPS WORLD</u>, will bring the entire world together in just two weeks on March 27-28. Over a 48-hour period, more than 400 speakers from the following regions will present the latest in aesthetic plastic surgery: Australia, New Zealand & Far East Asia; Middle East, Africa & South Asia; Europe; North America; and Latin America. I hope you will join us and participate in exciting parallel sessions, live symposia, and a virtual

exhibition, as well as enjoy the opportunity to network with colleagues and friends from all over the world!

ISAPS EXECUTIVE OFFICE

At the end of last year, Catherine Foss retired from her position as Executive Director, passing on the role to Sarah Johnson. In addition, we have added two new staff members: Richard Guy for Membership Management and Laura Lundy for Event Management. Richard is responsible for managing our growing group of members and supporting their needs, while Laura is helping create our educational Residents Program and further develop the ISAPS Fellowship Program. I am confident that our new executive team will work hard to bring ISAPS to an even higher level.

TEAM MEETINGS

During my term, ISAPS' leadership has been meeting regularly to plan events, discuss objectives, and strategize about ways to grow our leadership in aesthetic education and patient safety in this new era. The Board of Directors meets every two months while the Executive Committee meets monthly to make necessary decisions. I would like to thank my Board and the Executive Committee for their commitment to ISAPS and their enthusiasm.

In the past four months, I have had two productive meetings with our National Secretaries during which we talked about the communication between plastic surgeons and patients, strategies for membership growth, and how to further improve the quality of ISAPS education. We also organized a Strategic Planning Meeting with Global Alliance Partners, where I heard from our partner societies on topics like patient safety, global accreditation and universal

standards, and resident teaching. These meetings have been invaluable in helping us better understand members' expectations. Especially in these difficult times, we can be stronger together, and I look forward to working closely with my fellow Global Alliance Partners to strengthen these opportunities during my term.

ISAPS RESIDENTS PROGRAM

ISAPS is committed to the future generation of plastic surgeons. At the beginning of the year, we launched a refreshed and enhanced Residents Program, specifically targeted to the needs of residents. Resident members will now have the chance to join our monthly virtual educational sessions and take part in new mentorship opportunities, and will continue to benefit from our existing Fellowship Program. We also launched a new Meet the Expert webinar series for ISAPS' residents, the first of which I participated in on January 30th. These Meet the Expert sessions will continue throughout the year with experts in various fields of aesthetic surgery.

ISAPS MEMBERSHIP

Despite the ongoing pandemic, membership renewal for 2021 was very high. I would like to thank our National Secretaries, who put in a great deal of effort to retain members in their countries, for their hard work. I would also like to express my gratitude to all our members who have decided to stay with us. ISAPS is your society and we will continue to strive to better serve you and grow our community with you.

Here's to a better year - happy reading!

Sincerely,

Nazim Cerkes, MD, PhD

ISAPS President, 2020-2022

Clazini Cerher

MESSAGE FROM

the Education Council Chair



OZAN SOZER - UNITED STATES
Chairman. ISAPS Education Council

Dear ISAPS Members.

Happy New Year! 2020 was far from the special year we hoped for, but I am hopeful that 2021 will be an improvement. Despite the pandemic, I am pleased to announce that ISAPS' Education Council has been working hard to bring you the best aesthetic education in the world, even virtually. I would like to take this opportunity to focus on an event that has been created for this purpose and will take place on March 27 - 28: ISAPS WORLD.

In the new world of virtual education, we are all getting weary of the overabundance of webinars. However, ISAPS WORLD is not like any other virtual event. Rather, it is a collaborative effort designed to bring surgeons from all over the world together in a nonstop 48-hour program during which the sun will not set over ISAPS.

The last time the whole world got together was the 2018 ISAPS World Congress in Miami, which I believe was one of the best aesthetic meetings we had ever organized. However, despite the meeting's success, it wasn't perfect: the registration fee was over \$1,000, participants had to take time off of work and pay for travel and lodging, and only one conference could be attended at a time.

Although we all miss the live events of the past, ISAPS WORLD is the only event where you can witness the world coming together in the name of ISAPS, all from the comfort of your living room. You will be able to ask questions to talented surgeons

from all parts of the world, visit the virtual exhibition, and chat with your friends from far away – even in your pajamas! Moreover, you will be able to hear some of these programs delivered in their native languages while still being able to understand everything through the provided subtitles. Once the event has ended, all exclusive content will be available to revisit on demand for one month.

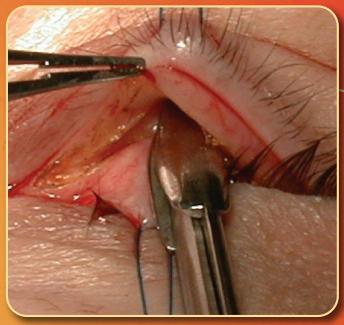
All of this and more is available to our members for a small fee beginning at only \$100. I sincerely believe that this will be the best \$100 you will spend this year, and I hope you will all join us in a couple of weeks.

Alongside ISAPS WORLD and our monthly Master Class webinars, we have several more events planned for you this year. ISAPS Business School will be held on Saturday, April 17, a two-part Regenerative Medicine Meeting will take place in May and July, and ISAPS Hair Transplantation Course will take place on May 8 – 9. Of course, we are still hopeful that we will be able to organize some hybrid events during the second part of 2021.

Whether virtually or in person, I look forward to seeing all of you in the near future.

Sincerely, Ozan Sozer, MD

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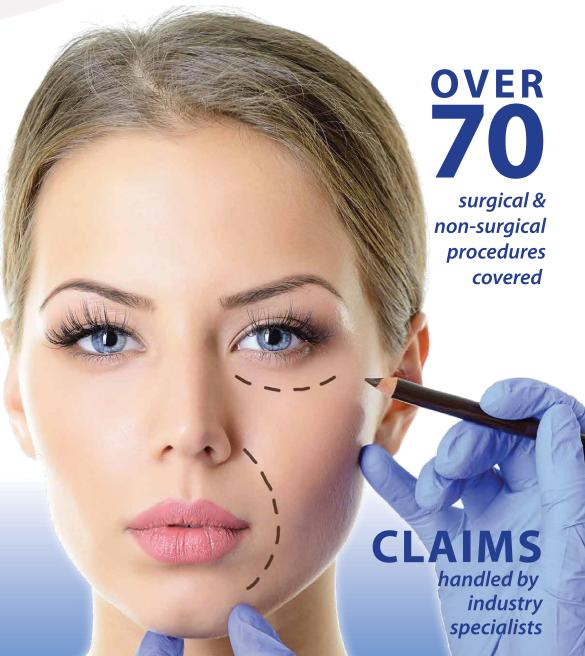
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Österreichische Gesellschaft für Plastische, Ästhetische und Rekonstruktive Chirurgie (ÖGPÄRC)

Society of Plastic Surgery Azerbaijan (SPSA)

BANGLADESH

Bangladesh Society of Aesthetic Plastic Surgeons (BSAPS)

BELGIUM

Royal Belgian Society for Plastic Surgery

Sociedad Boliviana de Cirugia Plastica Estetica y Reparadora (SBCPER) BRAZIL

Sociedade Brasileira de Cirurgia Plástica (SBCP)

Bulgarian Association of Plastic, Reconstructive and Aesthetic Surgery (BULAPRAS)

Canadian Society for Aesthetic Plastic Surgery (CSAPS)

Sociedad Chilena de Cirugía Plástica, Reconstructiva y Estética (SCCPRE)

Chinese Society of Plastic Surgery (CSPS)

Sociedad Colombiana de Cirugía Plástica, Estética y Reconstructiva (SCCP)

Cyprus Society of Plastic, Reconstructive

and Aesthetic Surgery (CySPRAS)

Czech Society of Aesthetic Surgery (CSAS)

Czech Society of Plastic Surgery (CSPS)

Dansk Selskab for Kosmetisk Plastikkirurgi

DOMINICAN REPUBLIC

Sociedad Dominicana de Cirugía Plastica Reconstructiva y Estética (SODOCIPRE)

European Association of Societies of Aesthetic Plastic Surgery (EASAPS)

Sociedad Ecuadoriana de Cirugía Plástica, Reconstructiva y Estética (SECPRE)

Egyptian Society of Plastic and Reconstructive Surgeons (ESPRS)

ISAPS GLOBAL ALLIANCE PARTICIPATING SOCIETIES

European Society of Aesthetic Plastic Surgery (ESAPS)

European Society of Plastic, Reconstructive and Aesthetic Surgery (ESPRAS)

Suomen Esteettiset Plastiikkakirurgit r.v. (SEP)

Societé Française des Chirurgiens Esthétiques Plasticiens (SOFCEP)

Georgian Society of Plastic Reconstructive and Aesthetic Surgery (GEOPRAS)

Deutsche Gesellschaft der Plastischen, Rekonstruktiven und Ästhetischen Chirurgen e.V. (DGPRÄC)

Vereinigung der Deutschen Aesthetisch Plastischen Chirurgen (VDAPC)

Hellenic Society of Plastic, Reconstructive and Aesthetic Surgery (HESPRAS)

Asociación Guatemalteca de Cirugía Plástica Estética y Reconstructiva (AGCPER)

Hungarian Society for Plastic, Reconstructive and Aesthetic Surgery (HSPRAS)

INDIA

Indian Association of Aesthetic Plastic Surgeons (IAAPS)

Indonesian Association of Plastic Reconstructive and Aesthetic Surgeons (InaPRAS)

IRΔN

Iranian Society of Plastic and Aesthetic Surgeons (ISPAS)

Irish Association of Plastic Surgeons (IAPS)

International Society of Aesthetic Plastic Surgery (ISAPS)

ITALY

Associazione Italiana di Chirurgia Plastica Estetica (AICPE)

Società Italiana di Chirurgia Plastica Ricostruttiva ed Estetica (SICPRE)

JAPAN

Japan Society of Aesthetic Plastic Surgery (JSAPS)

Jordanian Society for Plastic and Reconstructive Surgeons (JSPRS)

KAZAKHSTAN

Kazakhstan Society of Aesthetic and Plastic Surgery (NSAPS)

Korean Society of Aesthetic Plastic Surgery (KSAPS)

44. KUWAIT

Kuwait Society of Plastic Surgeons (KSPS)

45. LEBANON

Lebanese Society of Plastic, Reconstructive, and Aesthetic Surgery (LSPRAS)

ΜΔΙ ΔΥΣΙΔ

Malaysian Association of Plastic Aesthetic and Craniomaxillofacial Surgeons (MAPACS)

Asociación Mexicana de Cirugía Plástica Estética y Reconstructiva (AMCPER)

Société Marocaine des Chirurgiens Esthétiques Plasticiens (SOMCEP)

Nederlandse Vereniging voor Esthetische

Plastica (ANCP)

Plastische Chirurgie (NVEPC) NICARAGUA Asociación Nicaragüense de Cirugía

Norwegian Society of Aesthetic Plastic Surgery (NSAP)

Omani Society of Plastic, Reconstructive and Aesthetic Surgery (OSPRAS)

Oriental Society of Aesthetic Plastic Surgery (OSAPS)

Pakistan Association of Plastic Surgeons (PAPS)

Asociacion Panameña de Cirugia Plastica, Estetica y Reconstructiva (APCPER)

Sociedad Peruana de Cirugía Plástica (SPCP)

PHILIPPINES

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Polish Society of Plastic, Reconstructive

and Aesthetic Surgery (PSPRAS)

Sociedade Portuguesa de Cirurgia Plástica Reconstrutiva e Estética (SPCPRE)

Romanian Aesthetic Surgery Society (RASS)

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Russian Society of Plastic, Reconstructive and Aesthetic Surgery (RSPRAS)

SAUDI ΔΡΔΒΙΔ Saudi Plastic Surgery Care Society (SPSCS)

Serbian Society of Aesthetic Plastic

Surgeons (SRBSAPS)

Serbian Society of Plastic, Reconstructive, and Aesthetic Surgery (SRBPRAS)

SINGAPORE

Singapore Association of Plastic Surgeons (SAPS)

SOUTH AFRICA

Association of Plastic, Reconstructive and Aesthetic Surgeons of Southern Africa (APRASSA)

Asociación Española de Cirugía Estética Plástica (AECEP)

Sociedad Española de Cirugía Plástica Reparadora y Estética (SECPRE)

Svensk Förening för Estetisk Plastikkirurgi (SFEP)

SWITZERLAND Schweizerische Gesellschaft für Aesthetische Chirurgie (SGAC)

Swiss Society of Plastic, Reconstructive and Aesthetic Surgery (SSPRAS)

Taiwan Society of Aesthetic Plastic Surgery (TSAPS)

Taiwan Society of Plastic Surgery (TSPS)

Society of Aesthetic Plastic Surgeons of Thailand (THSAPS)

Turkish Society of Aesthetic Plastic Surgery (TSAPS)

Ukrainian Association of Plastic, Reconstructive and Aesthetic Surgeons (UAPRAS)

Ukrainian Society of Aesthetic Plastic

Surgeons (USAPS) UNITED ARAB EMIRATES

Emirates Plastic Surgery Society (EPSS)

British Association of Aesthetic Plastic Surgeons (BAAPS)

UNITED KINGDOM United Kingdom Association of Aesthetic Plastic Surgeons (UKAAPS)

American Society for Aesthetic Plastic Surgery, Inc. (ASAPS)

Sociedad Venezolana de Cirugía Plástica.

Reconstructiva, Estética y Maxilofacial

Vietnamese Society of Aesthetic and Plastic Surgery (VSAPS)

GLOBAL ACCREDITATION



OZAN SOZER - UNITED STATES

Chairman, ISAPS Global Accreditation Committee

Dear ISAPS Members,

The Global Accreditation Program was initiated by former ISAPS President Dr. Renato Saltz almost three years ago. After months of hard work and multiple meetings, we had a solid game plan in place and were close to beginning the program when COVID-19 brought everything to a standstill.

At the beginning of the year, we decided it was time to return to the program. I believe that with the pandemic we have realized the importance of maintaining a safe surgical facility. While hospitals were flooded with COVID-19 patients and elective procedures were suspended, outpatient surgery centers became the only places we could practice. In these centers we were able to offer our patients a safer environment than many hospitals could provide.

In light of this, ISAPS is embarking on a renewed collaborative effort with the American Association for Accreditation of Ambulatory Surgery Facilities (AAAASF) to provide accreditation of surgical facilities worldwide. AAAASF has actually been working with ISAPS since 2005 to find ways to improve patient safety around the world. Its program was first initiated in 1980 and has since been approved throughout the United States and internationally by the ISQua External Evaluation Association and the United Arab Emirates. AAAASF has also contributed to European norms for quality and safety.

The accreditation process is intended to demonstrate unequivocally to the public as well as to the medical community that approved surgical facilities strictly comply with a rigorous set of standards and provide the safest care possible. With the Global Accreditation Initiative, qualified and responsible plastic surgeons will be able to distinguish themselves from non-accredited facilities. In addition, the program will help reframe the conversation and media coverage around any adverse events.

Now is a critical time for us all to commit to elevating care through accreditation, and this program is our vehicle to do so. In the coming months we will be providing additional information about patient safety and accreditation and we will be holding various accreditation-themed events. I strongly encourage you to seek out more information and to join us for these events, and ultimately to have your facilities accredited through the ISAPS-AAAASF Global Accreditation Initiative.

Deonou



Figure 1: INTERPLAST visit in the refugee camps of Northern Iraq.

HUMANITARIAN

SUPPORT IN NORTHERN IRAQ



ANDRÉ BORSCHE GERMANY

NTERPLAST-Germany was founded in 1980 and stands for international plastic reconstructive surgery in developing countries. As a non-governmental organization for humanitarian aid, the group organizes operative camps for plastic surgery all over the world. In the last 40 years, the teams of INTERPLAST have operated on more than 100,000 patients throughout 1,500 missions and have run hospitals in Nepal and Africa. Regular and consecutive surgical camps are required in each place. While there, operating surgeons perform basic plastic surgery techniques and teach procedures to local surgeons so they can better help their own people and improve the effectiveness of their dedication.

Plastic surgeons from INTERPLAST-Germany were invited by the Barsany Charity Foundation (BCF) to visit Erbil in Northern Iraq. BCF takes care of around 700,000 refugees in various camps and provides medical support to hundreds of people in need. As German doctors, we were impressed by the enthusiasm and expertise of the local medical workers and doctors which look after the refugees. In order to support the camps, who lack many medical materials, we provided them with extra medications, bandages, surgical instruments, and even financial donations. In addition, thanks to our collaboration with the NGO Wings of Help, we were able to donate 250,000 protective face masks.

Our past experiences from INTERPLAST missions to Amman, Jordan and from an ISAPS mission to Reyhanlı, Turkey demonstrated the urgent need for plastic and reconstructive surgery among refugees, who are often traumatized and challenging to treat. In Erbil, we met experienced plastic surgeons who took excellent care of their patients. These

surgeons ran a burn unit and provided emergency life-saving medical treatment to refugees. However, many reconstructive procedures were limited due to financial reasons. Our colleagues in Erbil showed us many patients with severe burn sequelae, hypertrophic scars, and post-burn contractures who would benefit from further plastic surgery. Our team discussed the technical details of possible procedures and issues that may arise post-care with them.

Among refugees, the rate of suicide is very high. Often, people set themselves on fire with kerosene, but they do not always succeed in killing themselves. Instead, they end up in a situation where they are now physically and psychologically suffering. Plastic reconstructive surgery may help burn patients overcome their trauma and improve their functional and aesthetic appearance. INTERPLAST helps

by providing surgical items like expanders and purchasing compression garments. In certain severe cases, we may work together with local surgeons or handle the treatment.

Humanitarian aid in the field of plastic surgery should not only remain a local task but also grow into a worldwide activity to provide the most effective aid. If we share our experiences from these missions and are more transparent about our activities with each other, we will all benefit. This will helps us learn about problems and about how to manage them better. The humanitarian goals of ISAPS underline the importance of collaboration with other charitable organizations. INTERPLAST-Germany will take an active part in this process of coordination, improving communication, and showing respect for other individuals engaged in humanitarian plastic surgery.



Figure 2: Dedicated medical workers in the refugee camp.



Figure 3:. Disfigurement after burn trauma.



Figure 4: Severe burn sequelae after a suicide attempt.



Figure 5: Meeting the plastic surgeons in Erbil.



Figure 6: Donating medical items from INTERPLAST.



MemoryGel® Breast Implants Are Safe and Effective 14





MILLION+ Women with MENTOR® Breast Implants³

MemoryGel® Core Study Highlights

Lighest 97% Patients indicated that they would make the same decision to have Patient Satisfaction§4

breast implant surgery at 10 years



Reported Kaplan-Meier estimated cumulative incidence of key complications at 10 years for round gel implants among the primary augmentation cohort*5

¥MemoryShape Post-Approval Cohort Study (formerly Contour Profile Gel Core Study) Final Clinical Study Report, Mentor Worldwide, LLC; 02 June 2015, MemoryGel Core Cel Clinical Study Final Report, Mentor Worldwide, LLC; **MemorySingper Past-Approval Control study (tomority Contour Profile Get Ozer Study) Final Report. MemorySingper Past-Approval Control study (tomority Contour Profile Get Ozer Study) Final Report. Ozer Lamica Study Final Report. MemorySingper Past-Approval Continued Access Study (formerly Contour Profile Get Core Study), Final Report. Ozer Lamica Study Report. Approval Continued Access Study (formerly Contour Profile Get Continued Access Study), Final Report Cortober 2012. Memory Study Report. Ozer Study Study Report. Ozer Study Study Report. Ozer Study Study Study Final Report For Memory Science Study Study Study Final Report For Memory Science Study Study Final Report For Memory Science Study Study Final Report For Memory Science Study Final Report For Memory Science For Memory Science For Final Report For Memory Science For Final Report For

Not a head to head clinical study. Based on a comparison of 10 year core clinical study data for Primary Augmentation, Revision Augmentation, and Primary Reconstruction for MENTOR" MemoryGel® Breast Implants and NATRELLE® Round TruFormI Gel Breast Implants

- 1. MemoryShape Post-Approval Cohort Study (formerly Contour Profile Gel Core Study) Final Clinical Study Report. Mentor Worldwide, LLC; 02 June 2015. MemoryGel Core Cel Clinical Study Final Report. Mentor Worldwide, LLC; April 2013. Mentor MemoryGel Post-Approval Continued Access Study (formerly Contour Profile Gel Continued Access Study), Final Report. October 2014. Mentor MemoryGel Breast Implant Large Post Approval Study Re-Op Phase Annual Report. 17 June 2016. Adjunct Study Final Report for Mentor's MemoryGel Silicone Gel-filled Breast Implants. 02 November 2012. Mentor MemoryShape CPG Styles Study: A Study of the Safety of the Contour Profile Gel Breast Implants in Subjects who are Undergoing Primary Breast Augmentation, Primary Breast Reconstruction, or Revision, Final Clinical Study Report. 20 October 2015.

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IMPORTANT SAFETY INFORMATION MENTOR* MemoryGel* Breast Implants are indicated for breast augmentation, in women who are at least 18 years old, or for breast reconstruction. Breast implant surgery should not be performed in those women with active infection anywhere in their body, those with existing cancer or pre-cancer of their breast(s), those who have not received adequate treatment for these conditions or those who are pregnant or nursing. There are risks associated with breast implant surgery. Breast implants are not lifetime devices and breast implantation is not necessarily a one-time surgery. The most common complications with MENTOR* MemoryGel* Breast Implants include re-operation, implant removal, capsular contracture, asymmetry, and breast pain. A lower risk of complication is implant rupture, which is most often silent. The health consequences of a ruptured silicone gel-filled breast implant have not been fully established. Screenings such as mammography, MRI, or ultrasound are recommended after initial implant surgery to assist in detecting implant rupture. Breast implants are also associated with the risk of breast implant analysis considered to be low. Your patient needs to be informed and understand the risks and benefits of breast implants, and she should be provided with an opportunity to consult with you prior to deciding on surgery. For detailed indications, contraindications, warnings and precautions associated with the use of all MENTOR* Implantable Devices, please refer to the Product Insert Data Sheet provided with each product or review the Important Safety Information provided at www.mentorswellceu.

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NS CHAIR REPORT

DEVELOPING POWERFUL COMMUNICATION WITH MEMBERS THROUGH THE NS NETWORK



MICHEL ROUIF - FRANCE
ISAPS Chair of National Secretaries

he second virtual ISAPS National Secretaries Meeting was held on Saturday, January 9th. About 60 countries had their National Secretary (NS) present for the first NS meeting of the year. We are now more familiar and more comfortable with the technology and I am positive that this quarterly meeting is slowly becoming a "gold standard" for our NS family, especially during the COVID-19 times.

After presentation of the 2020-2021 Board of Directors by ISAPS President, Nazim Cerkes, the new projects for 2021 were presented. Sarah Johnson, our new Executive Director, also introduced her executive office team. Richard Guy, who is responsible for managing all things relating to membership since October 2020, attended the NS meeting, as one of the critical topics was membership renewal.

During the first NS meeting of the year, we focused on three topics of discussion. For 10 minutes each, three board members presented their work to the National Secretaries. Vakis Kontoes, Chairman of the Membership Committee, gave an update on membership renewal, including the new, upcoming fast-track process. Ozan Sozer, Chairman of the Education Council, presented this year's new educational program, highlighting individual webinars and courses such as digital ISAPS symposia, an ISAPS Business School event, and ISAPS WORLD on March 27-28. The accreditation program, originally initiated in 2019-20, is being revived and all National Secretaries are invited to join and support this program. Finally, Fabian Cortiñas, Chairman of the Communication Committee, explained the society's ongoing efforts on social media.

For the second part of the meeting, three discussion groups were held simultaneously in separate Zoom rooms with about 18 National Secretaries attending each 40-minute workshop.

One board member was invited to join each group and get insight on the topic. Each group then had five minutes to present a summary in the plenary session. I want to thank all the National Secretaries and our Assistant Chair Bertha Torres (NS, Mexico) for the great work they did in all three workshops.

Education and Accreditation Chair, Gustavo Abrile (NS, Argentina), invited Ozan Sozer, who presented the unique global nature of ISAPS WORLD, which will feature 48 hours of live sessions and 400 faculty members. Dr. Abrile highlighted that this is the most important focus of Q1 and a unique opportunity for global collaboration.

For Membership and Development, Babak Nikoumaram (NS, Iran) invited Vakis Kontoes and Richard Guy. Topics included marketing strategies to attract new members, feedback on the NS applicant review process, tools to promote membership renewal, the upcoming fast-track process, and the new Residents Program.

For Communication and Marketing, Francesca de Angelis (Assistant NS, Italy) and Naveen Cavale (NS, UK) invited Fabian Cortiñas. This group's discussion focused on how to promote ISAPS to patients in in different countries and how to combat issues arising from medical tourism.

This time spent with the National Secretaries, several board members, and the executive office team was a wonderful opportunity to move ISAPS forward. Listening to one another, bringing in new ideas from both sides, and creating a spirit of unity strengthen ISAPS' development.

The next online National Secretaries Meeting will be held in April-May 2021.

Be safe with friends and family.

ISAPS JOURNAL

MESSAGE FROM THE EDITOR-IN-CHIEF



BAHMAN GUYURON UNITED STATES

2020 will be remembered as a year that changed our lives immeasurably. The sorrow that many of us feel from losing loved ones cannot be described in words. Around the world, practices were shut down for long periods of time. However, our ingenuity as plastic surgeons and our prudent use of time never ceased.

The energy that was ordinarily used in the operating room while performing surgeries was instead channeled towards scholarly activities, research, and the preparation of articles. This culminated in many medical journals seeing an increase in paper submissions. In fact, the number of submissions to our journal, Aesthetic Plastic Surgery, which has been increasing annually since I first

assumed my position, increased by nearly 200% compared to my commencement year.

While COVID-19 is definitely a factor in the surge of article submissions, it is not the main reason that our number of submissions has gone up so colossally. Those of you who have been reviewing articles have contributed to our success inestimably. It has not gone unnoticed by authors that our turnaround time has greatly decreased. In fact, our current



turnaround time from article submission to first decision is a mere 14 days. According to the publisher's report, this is the shortest amount of time amongst the over 2,000 Springer journals. What is even more fascinating is that this is 50% faster than the second-best time listed in the report.

Your sagacious selection of articles also resulted in an increase in our journal's impact factor in 2020. Despite all this growth, we cannot simply be content, and we will continue to work towards improving our journal. Our goals for the journal include improving the quality of its articles, raising its impact factor, advancing the audiovisual effect of

the journal by adding more videos, increasing our presence on social media, and most importantly, making sure that your expectations from your journal are met.

You can be part of our crusade to make Aesthetic Plastic Surgery the best source of aesthetic plastic surgery information out there by volunteering to review articles. On behalf of our entire team, I would like to thank you for your support. We wish you safety and success in 2021.

GUEST ARTICLE FROM ISAPS GLOBAL SPONSOR



COMMITTED TO YOU, AND MILLIONS OF PATIENTS WORLDWIDE

GC Aesthetics® Ltd. (GCA) is a global medical device company based in Europe with two state-of-the-art manufacturing sites and systems in place to ensure the safety of our products through pre-clinical testing, clinical studies, and excellent global post-market surveillance, as well as continuous audits in our manufacturing sites: covering quality, technical, operational, microbiological, clinical, and regulatory data and processes.

With over 40 years of expertise in aesthetics and more than three million implants fitted over the last 10 years¹ we are proud of our 10-year clinical data: long-term proven safety in the only two large scale prospective European studies of breast implants, with 10 years of patient follow-up.

Our vision and values focus on safety, quality and reliability. We will continue to build on our strong reputation by innovating, listening, and improving as we strive to become the most-trusted and first-choice provider of surgical aesthetics.

In our commitment to be **A Confident Choice for Life™** we have evolved from breast implant suppliers to Solution Providers, supporting Surgeons and Patients with pre-surgery, surgery and post-surgery products.

With you, at every level of care:

Pre-surgery: Even before the surgery, GC Aesthetics supports patients and surgeons during the consultation. With **Eve 4.0™**, our interactive digital platform, and the GCA consultation kit, we offer products to aid the surgeon's explanation, help the patient better manage expectations and make a fully informed decision about surgery.

Surgery: GCA is your reliable partner for breast and body implants and surgical support. Backed by years of continuous research and development, GC Aesthetics offers the largest and most comprehensive range of silicone breast implants for aesthetic, reconstruction, and revision breast surgeries.

GCA offers: Anatomical and Round Breast Implants with different surfaces including Smooth, Smooth Opaque & Textured. Our most recent launch, PERLE™ the (r)evolutionary smooth opaque round breast implant & HydroCone™ a sterile, single patient use implant insertion device are two products that in combination will help surgeons achieve better outcomes reducing risk of complications.^{2,3}

Post-surgery: GCA support goes further than the operation alone. We know that recovery is just as important as the surgery itself. Our NOA™ compression garments ensure optimum results post-surgery for patients' comfort, and our GCA Comfort Plus™ Warranty provides a comprehensive lifetime warranty on all GCA breast implants.

Through a culture of continuous innovation and dedication, GCA continues to strive to be the long-term partner-of-choice for both surgeons and patients.

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IN MEMORIAM

DR. EDWARD ABDEL NOUR, MD (1950-2021)



EDWARD ABDEL NOUR

n Sunday, February 28th, Dr. Edward Abdel Nour passed away at the Hotel Dieu de France University Hospital, after a long battle against COVID-19. The news came as a shock to the Lebanese plastic surgery community. Dr. Abdel Nour was a well-trained and prominent plastic surgeon and was highly regarded for his service and expertise. He was known for his kindness and caring with all his patients.

Dr. Abdel Nour was born in 1950 and graduated from Saint Joseph University Medical School in Lebanon. He also received

his plastic surgery training at Saint Thomas' Hospital in London. After returning to Lebanon in 1992, he developed a busy private practice, and also served as a mentor to many plastic surgeons. He first joined ISAPS in August 1999 and regularly attended ISAPS meetings. I remember we met frequently at many international conferences.

Dr. Abdel Nour is survived by his wife, the well-known pediatrician Dr. Hoda, and his sons Raja and Richard.

HISTORY

FRANKENSTEIN, THE AESTHETIC FAILURE'



DENYS MONTANDON
SWITZERI AND

"I perceived in the gloom a figure which stole from behind a clump of trees near me; I stood fixed, gazing intently: I could not be mistaken. A flash of lightning illuminated the object, and discovered its shape plainly to me; its gigantic stature, and the deformity of its aspect, more hideous than belongs to humanity, i nstantly informed me that it was the wretch, the filthy dæmon, to whom I had given life."

Mary Shelley's Frankenstein



Mary Godwin-Shelley.

ince its first publication in 1818, the tale of Frankenstein, written by a 19-year-old woman (Figure 1), has not ceased to fascinate humanity. Today, Mary Shelley's Frankenstein is considered a literary classic. In 2019, the BBC labeled it one of the 100 most inspiring novels. It has inspired numerous literary essays, articles, novels, theater plays, movies, TV shows, drawings,

paintings, and sculptures. 'Frankenstein' itself has become a well-known word, often used to describe a monster or to symbolize horror. The book has been analyzed and dissected by philologists, historians, philosophers, psychoanalysts, and science fiction experts, and has been applied to major questions of the time, like the French Revolution, the abolition of slavery, and plague epidemics. In this day and age, it resonates as a warning for the potential dangers of new technologies like human cloning or artificial intelligence. But it may also transmit a message to plastic and reconstructive surgeons.

GENEVA, 1816: WHERE IT ALL STARTED

"I am by birth a Genevese, and my family is one of the most distinguished of that republic." So begins the narrative of doctor Victor Frankenstein.

In the spring of 1816, Lord Byron and his lover, John Polidori, fled scandal and left England for Geneva. fled scandal and left England for Geneva. There they were joined by the poet Percy Shelley, Mary Godwin, and Mary's stepsister Claire Clairmont (Figures 2a-2d). All of them were followers of free love; moralizers called them the "League of Incest." By summertime, Clairmont was pregnant by Byron, who had left his pregnant wife and daughter in England. The 18-year-old Mary Godwin, daughter of the radical thinker and feminist writer Mary Wollstonecraft and the liberal philosopher William Godwin, was now pregnant with Shelley's child, whom she married a year later.



Figure 2a: Lord Buron.



Figure 2b: Percy Shelley.



Figure 2c: John Polidori.



Figure 2d: Claire Clairmont.

In Geneva, the group rented a splendid villa dominating the lake, just outside the city (*Figure 3*). However, the eruption of Mount Tambora had created "a year without a summer" and it was cold and rainy. To satisfy their romantic aspirations, they visited the suburbs of Geneva, climbed Mont Blanc to see the Sea of Ice, and sailed on Lake Geneva amidst dreadful storms. They turned to reading, drinking and sex – but Byron was bored. One evening, he announced, "We will each write a ghost story."

¹ This article was published in the Journal of Craniofacial Surgery in April 2020. It is reproduced with permission from the Editor, Mutaz Habal.



Figure 3: Villa Diodati, near Geneva.

"The noble author began a tale, a fragment of which he printed at the end of his poem of Mazeppa. Shelley commenced one founded on the experiences of his early life. Poor Polidori had some terrible idea about a skull-headed lady, who was

so punished for peeping through a key-hole..." Mary's inspiration came to her in a dream. Originally intended to be a short story, her ghost story became a book in three volumes after encouragement from Shelley. She was still nursing when she began writing her novel and was pregnant again by the time she finished in May 1817. Frankenstein was published anonymously in 1818, not least out of a fear that she might lose custody of her children.

The first theatrical production of Frankenstein was staged in London in 1823. The story became an immediate sensation, but was also criticized for its radicalism and its Byronic impieties. Critics called it "a tissue of horrible and disgusting absurdity, radically unhinged and immoral." The first popular edition was published in 1831, heavily revised and shortened to make it less scandalous, with a new preface in which Mary writes: "How I, then a young girl, came to think of, and to dilate upon, so very hideous an idea."

THE STORY

Born into a wealthy Genevan family, Victor Frankenstein is encouraged by his father to seek a greater understanding of the world through chemistry. Since childhood, he has been obsessed with studying outdated theories simulating natural wonders. Sent by his father to university in the German city of Ingolstadt, he excels at chemistry and other sciences, soon developing a secret technique to impart life to non-living matter. Collecting pieces of cadavers and using a combination of ancient and modern methods, he undertakes the creation of a humanoid and brings



Figure 4: Statue of the monster in the city of Geneva, where he committed his crimes.

him to life. Despite Victor designing him to be beautiful, upon animation the creature is instead "a hideous giant, with watery white eyes and yellow skin that barely conceals the muscles and blood vessels underneath" (Figure 4).

To Victor's despair, the creature soon disappears. Victor returns to Geneva, where he learns that his younger brother has been killed in a strange manner. A young girl is accused of the crime, but Victor suspects his wretched creature to be the culprit. Ravaged by grief and guilt, Victor retreats into the mountains close to Mont Blanc. The creature finds him there and pleads for Victor to hear his tale. He then relates his first days alive, of being alone in the wilderness and discovering that people were afraid of and hated him due to his appearance. He learned to speak by living near a poor family for months and taught himself to read using a lost satchel of books he found in the woods. After seeing his reflection in a pool, he realized that he was hideous and that he was as terrified of himself as other humans were.

The creature explains that he tried to love and help the humans, but he was always rejected. He shares with Victor his distress that he will never be part of human society and asks him to fashion a female mate for him so that he can retire to the deserts of South America, where he will never meet or harm another human. Victor agrees and moves to the Orkney Islands to begin his task, where he suspects that the creature has followed him. Out of fear that creating a female creature might lead to the breeding of a race that could plague mankind, Victor tears apart the unfinished female creature.

Out of revenge, the creature strangles Victor's best friend and, the day after Victor's wedding, strangles his wife. Victor attempts to catch him and pursues him all the way to the North Sea, where he collapses from exhaustion and hypothermia. He is rescued by a British ship and dies on board. After discovering Victor's death, the creature vows to kill himself so that no one else will ever know of his existence. The creature drifts away on a piece of ice that is soon "lost in darkness and distance," never to be seen again.

ALCHEMY

Despite her extraordinary education in philosophical and political matters as well as in literature and poetry, Mary had little scientific background. However, she recalls in the novel's preface: "During one of the conversations between Lord Byron and Shelley, various philosophical doctrines were discussed, and among others the nature of the principle of life, and whether there was any probability of its ever being discovered and communicated. They talked of the experiments of Dr. Darwin..."

Perhaps she was also inspired by Geneva, which at that time was a center for scientists. In the novel, Victor Frankenstein mentions his passion for the occult and modern sciences: "Natural philosophy is the genius that has regulated my fate; I desire, therefore, in this narration, to state those facts which led to my predilection for that science." During his studies in Ingolstadt, he refers to several renowned natural scientists including Albertus Magnus, Cornelius Agrippa, and Paracelsus, and confesses: "I read and studied the wild fancies of these writers with delight; they appeared to me treasures known by too few besides myself. I have described myself as always having been imbued with a fervent longing to penetrate the secrets of nature."

Although less well-known today, these three scientists were known for their ideas on transforming matter and creating elixirs of life. They are considered pioneers in the field of natural science and early contributors to today's pharmaceutical industry.

Albertus Magnus (1200-1280) was a German Dominican friar and bishop known for his encyclopedic knowledge and writings on topics such as logic, botany, geography, astronomy, astrology, mineralogy, alchemy, zoology, and physiology. Magnus is said to have discovered the philosopher's stone, a legendary substance capable of turning base metals into gold that is also known as the elixir of life, as it enables the achievement of immortality.

Cornelius Agrippa (1486-1536) was a German polymath, physician, legal scholar, soldier, theologian, and writer. He is best known for his writings on occult philosophy and for his book On the Nobility and Excellence of the Feminine Sex, in which he tried to prove the superiority of women using cabalistic ideas. Nicknamed the Archimagus, Agrippa also spent time in Geneva as a physician.

Paracelsus (1494-1541) was a Swiss physician and alchemist. A crude and superstitious empiricist, Paracelsus was known for being an alchemist and astrologer as well as a megalomaniac wanderer and for peddling pamphlets, Bibles and self-portraits in Austria, Germany, and Italy. In 1526, Paracelsus was appointed as the city of Basel's doctor. He was also a provocateur, and during the feast of St. John in 1527, he threw the works of Galen and Avicenna onto a fire, proclaiming: "Go to the fire of St. John and let all that is bad disappear into the air with your smoke!" He urged his students to abandon this "dead knowledge" and to apply themselves only to the study of nature. He is credited as one of the fathers of pharmacology

and as the inventor of the painkiller laudanum, also called the wine of opium.

Johann Konrad Dippel (1673-1734) is not mentioned in Frankenstein, but it is probable that Mary had heard about him. Dippel was born at Castle Frankenstein near Darmstadt, Germany. He was a pietist, theologian, physician, alchemist, and occultist who led an adventurous life, often getting into trouble due to his controversial opinions and problems managing money. He was eventually imprisoned for heresy and served a seven-year sentence. Dippel also created Dippel's oil, which was supposed to be equivalent to the elixir of life. In his dissertation Maladies and Remedies of the Life of the Flesh, he claimed that souls could be transferred from one corpse to another by using a funnel.

ELECTRICITY

In Frankenstein, young Victor narrates: "[Following a storm in Geneva] we found a tree shattered in a singular manner. The catastrophe of this tree excited my extreme astonishment, and I eagerly inquired of my father the nature and origin of thunder and lightning. He replied "Electricity;" describing at the same time the various effects of the power. He constructed a small electrical machine and exhibited a few experiments." Mary noted that one evening in the middle of summer in 1816, the discussions had turned to the principle of life, and to topics such as the re-animation of a corpse and galvanism. There is also speculation that the character of Victor Frankenstein was inspired by Percy Shelley, who had experimented with

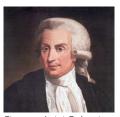


Figure 5: Luigi Galvani, with the body of a dead frog.

electricity and magnetism and with gunpowder and chemical reactions at school. Among the physiologists at the beginning of the 19th century, Galvani's ideas had an immense influence on the understanding of animal motricity.

Luigi Galvani (1737-1798) was an Italian physician, physicist, biologist, and philosopher, as well as a lecturer on

surgery and anatomy at the Academy of Sciences in Bologna (Figure 5). In the 1780s, Galvani and his wife connected the nerves of a recently dead frog to a long metal wire and pointed it toward the sky during a thunderstorm. With each flash of lightning, the

2.3

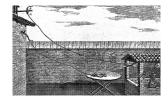


Figure 6: Galvani's experiment with electricity.

frog's legs twitched and jumped as if they were alive (Figure 6). Through such experiments, Galvani proved not only that dead muscle tissue could respond to external electrical stimuli, but that muscle and nerve cells possessed an intrinsic electrical force responsible for muscle contractions and nerve conduction



Figure 7: Aldini's re-animation of

in living organisms. Galvani named this newly discovered force "animal electricity" and laid the foundation for the modern fields of electrophysiology and neuroscience.

Galvani's nephew, Giovanni Aldini (1762-1834), was a physician and

professor of physics in Bologna. His work was chiefly concerned with galvanism and its medical applications. Aldini's most famous public demonstration of the electro-stimulation technique of deceased limbs was performed on the executed criminal George Forster in 1803. The Newgate Calendar describes what happened to Forster's body: "On the first application of the [galvanic] process to the face, the jaws of the deceased criminal began to quiver, and the adjoining muscles were horribly contorted, and one eye was actually opened. In the subsequent part of the process the right hand was raised and clenched, and the legs and thighs were set in motion" (Figure 7). Mary was only five years old at the time, but this extraordinary experiment certainly influenced Frankenstein: "By the glimmer of the half-extinguished light, I saw the dull yellow eye of the creature open; it breathed hard, and a convulsive motion agitated its limbs."

AESTHETICS

Aesthetic values were very much connected to the Romantic era, which was at its peak from 1800 to 1850. The most characteristic romantic view is the idea that art and beauty should shape all aspects of human life. Considered fundamental to human existence, beauty and art should be a central ingredient not only in the lives of philosophers and artists, but also in the lives of ordinary men and women. *Figures 1 and 2a-2d* perfectly express this romantic search for beauty in the subjects' outfits, hairstyles, and presentation.

So, what happened following the reconstruction of Frankenstein's monster? "Oh! no mortal could support the horror of that countenance. A mummy again endued with animation could not be so hideous as that wretch. I had gazed on him while unfinished; he was ugly then; but when those muscles and joints

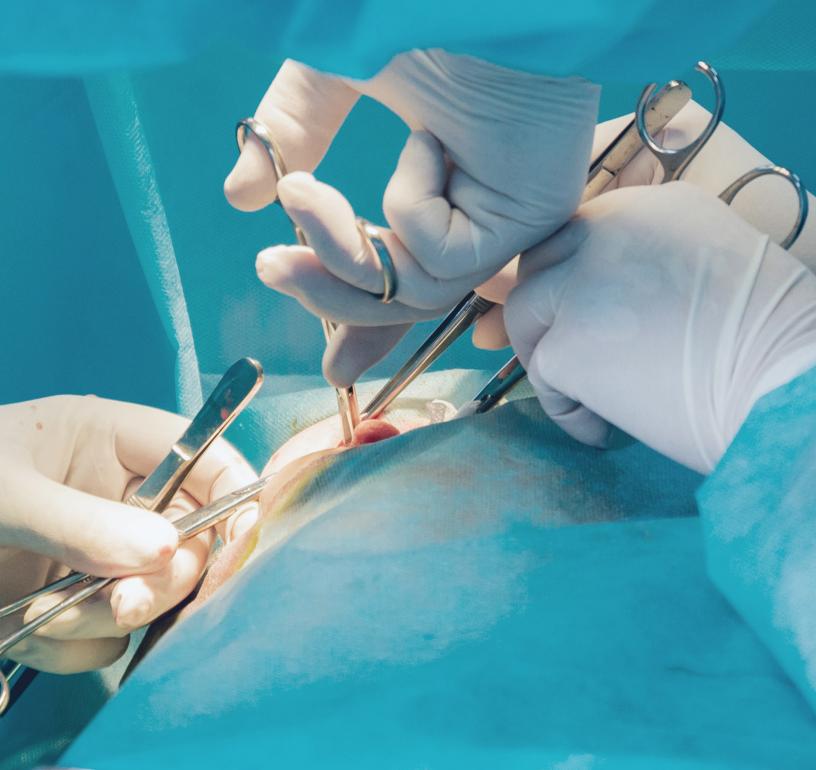
were rendered capable of motion, it became a thing such as even Dante could not have conceived." The creature, shaped from raw materials supplied by "the dissecting room and the slaughter-house," cannot be described by words other than "ugly wretch," "abhorred monster," "demon," "devil," "fiend," and "vile insect." With his ugliness, Victor's creature breaks the laws of nature. Although he can think, speak, read, and feel, his body is a failure due to "its form, gigantic in stature, yet uncouth and distorted in proportion." It is a living assembly of organs without respect for the aesthetic of nature. Its "ghastly and distorted" shape surpasses the limits of human normality. Victor himself is devastated when he first sees his creation: "Never did I behold a vision so horrible as his face, of such a loathsome yet appealing hideousness."

Mary took pains that the reader's sympathy would lie not only with Victor Frankenstein, but also with the creature, who is aware that his appearance arouses horror and suffers as a result. Hoping to fit in with regular people, the creature introduces himself to an old blind man who receives him without fear, but the drama arises as soon as he is seen by other people, who reject and banish him. His crimes are a consequence of the inhumanity linked to his appearance. Although born good, he has been treated so terribly that he has become a villain.

Victor Frankenstein himself is a genius plastic and reconstructive surgeon. He makes use of all the scientific knowledge available at the time and uses all kinds of methods, including bone transfers and fancy skin flaps. While he was able to animate his creature and to give him intelligence, the overall result was an aesthetic failure. He probably had no experience in aesthetic surgery!

Mary Shelley had a taste for the esoteric, the morbid, and the gothic. With Frankenstein she succeeded in crafting a tale that scares both children and adults more than 200 years later. But Mary herself was no stranger to tragedy. Throughout her life, she gave birth to four children, buried three, and lost another child to a miscarriage so severe that she nearly died of bleeding. While in Geneva, she learned that her half-sister Fanny Imlay had committed suicide. In 1822, her husband Percy, who had left her for Claire Clermont, embarked on a sailboat and drowned during a storm. A year earlier, John Polidori, weighed down by depression and gambling debts, had committed suicide by means of cyanide. In 1824, Lord Byron died of malaria in Missolonghi. As she later put it: "I am the last relic of a beloved race, my companions extinct before me."

BREAST REDUCTION HOWIDOIT



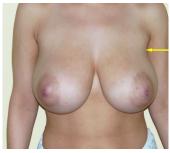
BREAST REDUCTION – A SIMPLIFIED APPROACH



ELIZABETH HALL-FINDLAY CANADA

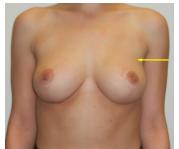


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Figures 1a, 1b: Frontal and lateral views of a 20-year-old patient who had 495 g and 455 g removed along with 150 cc of liposuction for final breast shaping.





Figures 1c, 1d: Patient at 18-month follow-up. The upper breast border (marked with a yellow arrow) did not change after the procedure.

INTRODUCTION

Preast reduction surgery using the true superomedial pedicle can provide consistent, predictable, and long-lasting results (Figures 1a-1d).

Although adding an inverted T-skin resection pattern is not needed as often as surgeons think, it may be necessary if there is too much poor-quality skin. Leaving the desired breast tissue attached to the upper skin flaps and removing the heavy inferior and lateral breast tissue respects the rules of gravity. The breast parenchyma is shaped, and the skin is not used as a brassiere.

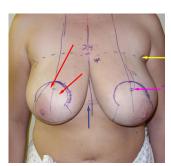


Figure 2a: The upper breast border is marked by a yellow arrow. The pink arrow shows the new nipple position. The vertical blue arrow shows the level of the inframammary fold at the level of the breast meridian.

MARKINGS

The upper breast border, marked by a yellow arrow, is a good landmark¹ because it does not change in breast reduction surgery (Figure 2a). Some patients have a high footprint, and some have a low footprint, and the footprint cannot be pushed up or held up with sutures.

The new breast meridian is not drawn through the existing

nipple but through the ideal breast meridian.

The new nipple position is marked at 10 cm below the upper breast border on the patient pictured in *Figure 2a*, who was 175 cm tall and weighed 80 kg. An ideal nipple is about 8-10 cm below the upper breast border in most patients and about the same distance from the chest midline.

The medial areolar opening and vertical limb are key to a good result. The lateral breast tissue is more mobile, so markings can be carried out laterally as much as needed to curve around any pigmented areolar skin. The surgeon should design the medial markings according to the Wise pattern² (Figure 2b).

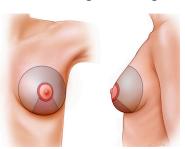


Figure 2b: Robert Wise designed a skin resection pattern based on a deconstructed brassiere. It is an excellent pattern for the parenchyma that should be left behind.

The areolar opening should be close to 16 cm as the areola will stretch to fit the skin opening.

The true superomedial pedicle has a dual axial blood supply. To include the descending artery from the second interspace, the base of the pedicle should be carried just past the breast

meridian into the lateral aspect of the areolar opening. Initially, the procedure was described using a medial pedicle, but it became clear that the strong descending branch was being unnecessarily sacrificed.^{3,4}

Because the inframammary fold (IMF) rises when weight is removed (even unintentionally) and closure of a vertical ellipse will push the vertical limbs superiorly and inferiorly, the vertical limbs should be joined together about 4 cm above the IMF.

TECHNIQUE

After the pedicle is de-epithelialized, an inferior wedge of skin and breast tissue is removed (*Figure 3a*). After leaving a 2-cm-thick lateral pillar, all the extra unwanted lateral breast tissue is removed.



Figure 3a: An inferior vertical wedge of skin and breast tissue is removed, and any excess breast tissue is removed by pulling up on the pedicle (uellow arrow).

The first suture is placed in the inferior aspect of the areolar opening. The extent of resection as well as the breast shape can then be evaluated, and the pedicle can usually be easily inset. Any parenchyma that is blocking inset can be debulked. It is important to prevent compression and kinking of the pedicle to avoid problems with nipple-areolar necrosis. The blood supply is

superficial as there is no blood supply through the parenchyma to the nipple in a superomedial pedicle.⁵

Pulling up on the pedicle as shown in *Figure 3a* will allow the pillars to fall together. The inferior border of the superomedial pedicle becomes the medial pillar. Pillar closure starts at the dotted line, not at the bottom of the skin opening and not at the IMF. The key is to produce a Wise pattern shape which can be left behind with no tension on the pillar closure. The breast should slide freely, and the lower end of the vertical incision should not be sutured down to the chest wall.

Note that the Wise pattern is marked with a dotted line in Figure 3a. All parenchyma and fat below and beyond the Wise pattern should be removed by direct excision and tailored out with liposuction. Liposuction is designed to remove any subcutaneous tissue that remains below what will end up as a nice curve, much like the underwire shape of a brassiere. It is important to leave fat on the underside of the skin flaps in order to prevent scar contracture from occurring.

The vertical skin closure should not be cinched, shortened, or gathered, as it stretches back out and the constriction of the skin



Figure 3b: On average, the pillars are about 7 cm long in a breast reduction, but the vertical skin can be over 10 cm in length because it tucks up behind the pillars.

edges can cause wound healing problems. Surgeons are often concerned about the length of the vertical incision. However, it is important to understand that while the pillars may be about 7 cm long, the skin is often 10 cm long or more and will tuck up behind the pillars (Figure 3b).

Drains are rarely used. The incisions are covered with paper tape and the patient is placed in a loose brassiere post-operatively (Figures 4α-4c).







Figures 4a, 4b, 4c. Patient from Figure 2a, post-breast reduction. The black arrow marks a mole showing how much the IMF was elevated just by weight removal. The cross-hatched lines in Figure 4b show where the tissue below the Wise pattern was removed.

SUMMARY

The true superomedial pedicle has an excellent dual axial blood supply and is one of the safest pedicles for a breast reduction procedure. In addition, this technique can be performed using either a vertical or an inverted T-type skin resection pattern. The result is predictable, consistent, and long-lasting because the removal of excess inferior and lateral parenchyma respects the effects of gravity.

The scars are the least important part. As surgeons, we should think about what we leave behind. That will tell us what we need to remove.

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MAMMARY REDUCTION & MASTOPEXY

HOW I DO IT WITH THE 'ADOPTED CIRCUMVERTICAL TECHNIQUE'

hroughout the last 25 years, I have relied on one technique as my go-to in mastopexies and mammary reductions: the adopted circumvertical technique. Let me tell you how I got there.

AUSTRIA

During my residency, we learned the Hoehler-Pitanguy vertical pedicle T-scar technique. I found LeJour interesting but disliked that soon after surgery, bottoming-out would often occur. This is a logical occurrence due to the fact that the entire skin circumference is tightened when making a vertical 5 cm scar. At the time, I found Mottura's work regarding the circumvertical reduction technique interesting. The advantage to this technique is that most of the remaining skin tissue is gathered around the areola instead of in the vertical scar. Thus, I adopted the circumvertical technique using my "Dirndl"-suture (2-0 Monocryl). The name for this suture comes from a traditional

Austrian dress, called a dirndl, where an overlocked vertical suture holds the body and breast of the woman in shape.

It is astonishing that over the years, I have never needed another approach. However, there are certain issues to consider when using this technique (*Figure 1*). For one thing, the marking cannot be measured as it can be when using different techniques (*Figure 2*). Instead, accurate marking comes with experience. Of course, the distance between the sternal notch and the upper pole of the areola is between 17-22 cm, but the extension of lateral de-epithelialization must be chosen carefully (*Figure 3*).

At the end of the procedure we see more volume in the upper pole region and a relatively flat lower pole. This must be explained in detail to your patients, and to your OR steam.

During the first postoperative week most of the volume is in one place, but it takes 3-6 months until the breast looks round and full (Figure 4). I think this is one of the method's great advantages, because it uses gravity to get the final - and lasting - shape. It is important to remind your patients that the goal is not to look good immediately following the procedure, but rather that your breasts look good over the next few years. With this technique bottoming-out is very rare, as only 6 cm of skin distance is gathered in a 4 cm vertical scar.

Another important point to make about the adopted circumvertical technique is that the base of the breast becomes up to 40% smaller. This is because the skin envelope as well as the breast

tissue are gathered in the vertical line. The skin is gathered by lateral de-epithelialization, the tissue by the central dirndlsuture. To adapt the wide diameter of skin gathered around the areola, it is necessary to use a O-pds slowly absorbable Benelli suture and a running 3-0 Prolene periareolar suture. I do not use drains, just adhesive strips, and a medical bra.

In the over 1,000 cases we have performed using this technique, there has been a low complication rate. To prevent problems with the healing of the wound, I cut a little extra pedicle at the point where the areola is attached to the vertical cut. As a result, we have never had areola necrosis, since this technique leaves 80% of the pedicle intact.





Figure 3: Side view of de-epithelialization.

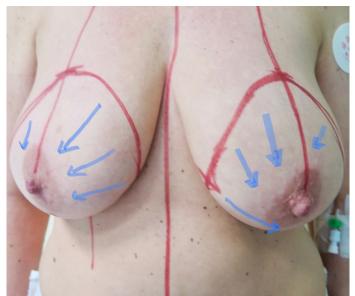


Figure 2: Preoperative patient with markings.



Figure 4: Postoperative patient. Patient has a short periareolar scar and a vertical scar.



EVIDENCE-BASED BREAST REDUCTION TOPICS

MARISA MANZANO SURROCA - SPAIN

his article is intended to highlight some steps used in breast reduction surgery that may be considered controversial.

Every patient is unique, so we cannot use the same surgical approach for every patient. The best technique is individualized to suit a patient's specific needs. There are many different factors that come into play when considering a breast reduction surgery, including the patient's skin, he position of their nipple-areolar complex (NAC), the volume and shape of their breasts, their age, and so on. Our expertise as surgeons is crucial when determining which method is the best for each patient.

PREDICTING COMPLICATIONS

There are many studies which show that a patient's baseline health status is an important predictor of complications in breast reduction surgery, but there is a great disparity in the results of each study. The use of the Clavien-Dindo classification' is therefore important because it allows a more objective comparison of the true incidence of complications.

BREAST IMAGING

Breast imaging is still quite controversial, especially in regard to patients under the age of 40. As a result, the cut-off age for breast imaging before surgery depends on the patients' location, background, and age. For patients under the age of 40, breast imaging may not always be possible, but for patients 50 or older, we should have an image control.²⁻³

INSURANCE COVERAGE

There are many different prediction scales, like the Schnur Sliding Scale from 1997, that are still used by insurance companies today to determine whether to cover a breast reduction surgery. There are two important aspects to consider about prediction scales:

- There is no single scale that can accurately and universally predict the resection weight for all patients.
- Often, insurance companies require a minimum of 750 g of tissue to be removed to provide coverage - however, symptom relief is not dependent upon the amount of tissue removed.

As a result, medical necessity should be based on the individual patient's symptoms and physical exam and on the physician's clinical judgment.

VASOCONSTRICTION INFILTRATION

Since we move and remove a lot of tissue during breast reduction surgery, blood loss is quite a concern. Using a tourniquet or epinephrine infiltration has resulted in the reduction of operative blood loss, independent of the concentration of epinephrine. Doing so does not increase the operative time of the procedure nor the chance of complications.⁴

DE-EPITHELIALIZATION

As a first-year resident, I was asked to perform the deepithelialization technique to preserve the cutaneous microcirculation. However, the benefits of de-epithelialization are not yet sufficiently proven.⁵⁻⁶ At the moment, there is not enough evidence to determine whether this step is actually necessary.

BREAST PATHOLOGY

The prevalence of incidental atypical proliferative lesions in breast reduction surgery is 4-10%. Invasive lesions and DCIS lesions appear at a rate of 0.05-2.5%. Occult neoplasia may be associated with one's weight, age, and BMI.

Even though the use of preoperative imaging and histopathology protocols vary internationally, it is recommended to analyze patients above the age of 40 for any benign or malignant lesions, as well as patients below the age of 40 in cases where their BMI is >30 or where the weight of the resected breast is over 750 g.⁷

CONCLUSION

To summarize Dr. Hall-Findlay, the best breast reduction is the one that is performed the best by the surgeon. To that I would also add that the best breast reduction is the one in which the patient's desired outcome is met.

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SCARLESS BREAST REDUCTION

USE OF ULTRASONIC LIPOSCULPTURE

ew procedures in our field have received as much attention and have stimulated the artistic capability of plastic surgeons as much as breast surgery has, in particular breast lift and breast reduction surgery. When performing these types of procedures, challenges include avoiding scarring, achieving fullness in the upper pole, preserving adequate vascularity and maintaining sensitivity in the nipple-areolar complex (NAC).

Despite the increased use of liposuction as a form of breast reduction surgery, few studies exist that examine the use of ultrasonic liposculpture alone in a breast reduction or a breast lift. Leonardo da Vinci stated that shape, function and beauty must always work together. In line with this principle, skin viscoelastic properties are important in helping us determine which scar technique to use and how the breast's volume should be distributed. The goals are to lift the breast and reduce volume without leaving a scar.

Liposculpture can be done by placing a 2 cm long scar on the inframammary crease. I prefer to use ultrasonic liposculpture, as it facilitates the procedure by passing through the mammary gland and removing fat from the area. In addition, ultrasonic liposculpture lifts the breast and can elevate the NAC once

the breast's weight has decreased. Other benefits of this method include the achievement of breast symmetry, the potential for skin to have better viscoelastic properties, and a reduced risk of ptosis.

When evaluating a patient, surgeons must evaluate the patient's skin quality, breast volume, and NAC position. The ideal candidate will have no risk factors for breast disease or existing symptoms. A full-body exam, including a lab test and pregnancy test, is mandatory. For patients under the age of 39, a breast diagnostic ultrasound is indicated, and for patients over the age of 40, a mammography.

There is currently no scientific data on whether breastfeeding may be affected after undergoing ultrasonic liposculpture to the breast. However, in cases where the breast is mainly enlarged by fatty tissue, liposuction generally does not disrupt the glandular elements.

Prior to surgery, the patient should discontinue the use of any medications or substances that may impair coagulation. Markings are done to label the areas were liposuction will occur and the existence of any breast asymmetries. Peripheral zones are also marked to reduce the upper waist perimeter and to improve the shape of the new breast.

TECHNIQUE

Liposuction is performed using tumescent anesthesia and intravenous sedation. Immediately prior to surgery, prophylactic antibiotics are administered to the patient and the patient is positioned in the supine position. An incision is made in the inframammary crease for the tumescent infiltration. After

waiting for 15 minutes, ultrasonic liposuction begins, starting with the prepectoral fat. Next, the lateral and medial aspects of the gland are targeted. Here, care must be taken to preserve the fat for the upper pole of the breast, as the goal is to maintain fullness in the breast. Fat is then removed from the entire gland in order to sculpt breast volume and reduce the peripheral volume.

Depending on the technology used, fat may need to be evacuated. If so, it is important to record the amount of fat that has been evacuated. In addition, tissues may become loose and mobile. In this case, a contralateral procedure is done to achieve symmetry in both breasts.

Upon completion of the procedure, patients are given a postop bra and sent to a hyperbaric chamber. Using a hyperbaric chamber post-operatively aids in the healing process, as liquid evacuates from the area and the chance of infection is reduced. Patients are told not to change their bra or wound dressing for the next five days. Over the next few months, the breasts will continue to reduce in volume and the skin will tighten (Figures 1, 2).

CONCLUSION

Ultrasonic liposculpture reduces the chance of injury to the thoracic wall, reduces bleeding, and results in firmer skin tightening. This technique is easy to perform by plastic surgeons who are familiar with liposuction and can improve quality of life for patients without the risk of producing visible scars. Additionally, among patients who have received this technique, there have not been any thermal nerve or glandular injuries.



Figure 1: Side view of patient, pre-operation and 6-months post-operation.



Figure 2: Front view of patient, pre-operation and 6-months post-operation.

BREAST REDUCTION



GUGLIELMO RUFOLO

INTRODUCTION

uring this study I considered many different characteristics of patients. Often, patients suffer from body image dissatisfaction, which is one of the major factors that motivates patients to undergo a plastic surgery procedure. However, few studies have studied the association between body satisfaction and breast reduction.



Figure 1.

OBJECTIVES

The goal of this study was to evaluate the impact of breast hypertrophy and breast reduction on body image (Figure 1).

METHODS

Breast hypertrophy patients, who had a mammaplasty reduction surgery already scheduled between June

2012 and December 2019 (mammaplasty group, MG), were prospectively evaluated using the body dysmorphic disorder examination (BDDE), body investment scale (BIS), and breast evaluation questionnaire (BEQ55) tools. Women with breasts of average size were also evaluated as study controls (normal-sized breast group, NSBG). In total, this study consisted of 50 women. All of the participants were interviewed at the initial assessment and after six months. I estimated a period of interview where data was analyzed before and after a period of six months. For a diagram illustrating the breast reduction surgery, please see *Figure* 2.

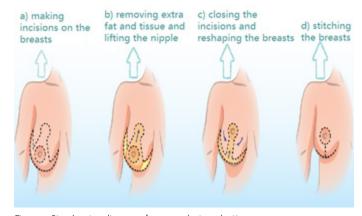


Figure 2: Step-by-step diagram of mammaplasty reduction surgery.

RESULTS

The MG group showed a significant improvement in their evaluation scores six months postoperatively, whereas the NSBG group showed no alteration in results over time. In the intergroup comparison, it was observed that the MG group began to have a more favorable body image, similar to that of the NSBG group. In fact, after surgery the MG group's level of satisfaction with their bodies surpassed that of the NSBG group.

CONCLUSIONS

Breast reduction procedures lead to an improvement in one's self-perceived body image among women including with breast hypertrophy. The final outcome for breast reduction patients was greater satisfaction in their appearance.

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COMBINING BREAST REDUCTIONS AND LIFTS

USING AN INFERIOR PARENCHYMAL FLAP FOR "AUTOLOGOUS AUGMENTATION"



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INTRODUCTION

omen may seek breast reduction surgery as a cosmetic or reconstructive procedure. Besides poor self-esteem, large breasts can also cause chronic back pain, skin irritation, and infections under the breasts.

When reducing the volume of tissue, women often prefer firmer, reshaped breasts with higher nipple-areolar complexes (NAC). To achieve this lifting effect, they are often advised to include a breast implant after the excision of redundant tissue. Alternatively, selected patients can undergo an "autologous augmentation mastopexy" procedure, where a part of their existing parenchyma can be projected into the upper pole and to the breast mound. This technique can reduce surgical costs and eliminate complications associated with breast implants. Even so, the potential for short-term recurrence of ptosis and the complexity of the procedures may not be appealing to some surgeons.

TIPS FOR A SUCCESSFUL AUTOLOGOUS AUGMENTATION MASTOPEXY



Figure 1: The Wise pattern as modified by Rezende.

Preoperative markings are based on a Wise Pattern that has been modified by Rezende¹ (*Figure 1*). By using templates, surgeons can save time and improve the final NAC symmetry. The dermolipoglandular inferior

flap is designed with a 6-8 cm wide base and a height that varies according to the desired final projection of the breast. It can easily be tailored to achieve maximal symmetry in breast volume and projection.

Start the procedure by de-epithelializing the marked areas: the NAC pedicle and the inferior parenchymal flap. Parenchymal detachment from the pectoralis major muscle follows and is performed before undermining the superior NAC pedicle and sparing the de-epithelialized inferior flap, as described by Ribeiro². Care must be taken in the progression of parenchymal release from the pectoralis fascia to preserve the most superior segment once it will be the source of the NAC supply. The supply for the NAC is usually superior or superomedial, based on the length of the pedicle, the amount of tissue to be resected, and the distance from the sternal notch to the nipple.

The flap's vascularization is provided by the fourth, fifth, and sixth intercostal perforating vessels of the internal mammary arteries. The axial vascularization allows easy cephalic repositioning of the flap at the chest wall and surgical fixation with sutures. The flap can be completely released from the inframammary fold (IMF) without compromising its vascularity, contributing to a tension-free and safe mobilization (*Figure 2*). The dermal release is done with a cautery, which also helps to tighten the skin at the IMF.



Figure 2: Intraoperative photograph shows the complete release of the dermolipoglandular inferior flap, allowing the flap to be placed in a more cephalic position secured by peripheral sutures.

Permanent sutures are placed around the entire inferior flap medially, laterally, and superiorly to embrace the dermis of the flap and the underlying muscular fascia. The dermal layer of the flap provides a strong structure to allow for long-term results. Sutures from the superior NAC pedicle are also extended to the top of the inferiorly based flap, bringing the two together. This also prevents the breast tissue from sliding over the inferiorly based flap, which can cause early relapse of ptosis.



Figure 3: Demonstration of reduction of breast volume. Lateral and medial pillars are brought together over the dermolipoglandular inferior flap, while the IMF is raised for a full effect of an "autologous mastopexy."

Reduction of breast volume usually takes place at the lateral pillars created after isolating the central flap (Figure 3), but may vary depending on which quadrant presents greater volume. The pillars are sutured centrally over the inferior pedicle. The final sutures must be

tension-free in order to avoid stretched scars or dehiscence. The NAC can also be excessively compressed by the inferior pedicle, which can lead to insufficient blood supply. In this case, sutures must be removed, and the additional tissue excised to avoid impairment to the venous outflow and subsequent necrosis.

Drains are placed around the top of the inferiorly based flap to eliminate any "dead space" and allow for early adhesion and healing. This could potentially be the main reason we do not see major changes in the overall shape and upper pole



Figure 4: Postoperative dressing with foam compression to secure (fixate) the newly elevated inframammary folds.

projection in long-term follow-ups.

Patients should wear a soft surgical bra with an additional foam mold positioned over the inframammary fold during the first two weeks postoperation (Figure 4). Doing

so also stimulates skin adhesion in this area. Drains should be removed within 5-7 days and lymphatic drainage massage can be started as early as post-operative day four.

CONCLUSION

With the autologous augmentation mastopexy technique, women can experience not only relief from macromastia symptoms, but also an improvement in their self-esteem as a result of firmer and better shaped breasts. It is a safe procedure that has a steep learning curve. In our experience, results are consistent for as long as 10 years of follow-up (Figures 5a-5i) and there is immense satisfaction from patients. A full description of the entire technique can be found in the beautiful, newly published Atlas of Contemporary Aesthetic Breast Surgery by Drs. Lee Pu and Mark Jewell.







Figures 5a, 5b, 5c: Preoperative and postoperative photographs of 1-year results.



Figures 5d, 5e, 5f: Preoperative and postoperative photographs of 8-year results.



Figures 5g, 5h, 5i: Preoperative and postoperative photographs of 10-year results.

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HOW TO TEACH BREAST REDUCTION SURGERY

WITH THE POSTERO-INFERIOR PEDICLE: A 3D MODEL

or a better understanding of how to perform breast reduction surgery using the postero-inferior pedicle technique, we created a "sponge" model to help young surgeons. The program was designed for residents during my tenure at the Hospital de Clínicas of the University of Buenos Aires, where I served as Chief of Division of Plastic Surgery from 2000 until 2014. The original description of this technique was first presented by Jalma Jurado¹ from Brazil, and then by Robbins², Courtiss and Goldwyn³, Kaplan⁴, and finally Jurado, who published his experience in 1979.

The postero-inferior pedicle technique has the following benefits:

- It is easy to teach and to perform
- If necessary, it is possible to check the weight of each quadrant and redo the excision at the same place (this is very important in cases of asymmetry)⁶

- In the case that a mistake is made and the pedicle is left too thin, a total vertical pedicle (mesentery) can be used, such as the McKissock technique⁷
- Each quadrant may be identified separately for pathology studies
- The cephalad end of the pedicle can be used to fill the upper pole

When using this technique, take the following precautions:

- Take care of the caudal portion of the septum and allow full visualization of the entire septal mesentery, so several perforating vessels in the septum can be seen. This technique optimally preserves the vascular and connective tissue support without excessive undermining of the pedicle⁸
- To avoid late ptosis, shorten the pedicle and fix it to the vertical incision

The postero-inferior pedicle technique is performed in the following steps:

- Design of the technique (Figure 1) 1.
- Periareolar incision (Figure 2) 2.
- De-epithelialization of the vertical structure (Figure 3) 3.
- Resection of the lower medial quadrant (Figure 4) 4.
- Resection of the lower lateral quadrant 5.
- Examination of the septal mesentery (Figure 5) followed by resection of the upper pole, if the septal mesentery looks good enough to move forward (Figure 6)
- Section of the medial and lateral pillars to connect the three quadrants (Figure 7)
- 8. Tailoring of the breast, including the size and shape
- 9. Placing of drains (Figure 8)
- 10. Plication of the inferior pedicle at the lower third using absorbable 3-0 sutures (Figure 9)
- 11. Placing of v-shaped sutures from the dermis to the pedicle (Figures 10, 11)
- 12. Placing of a skin suture (Figure 12)

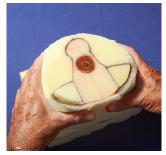


Figure 1: Design of the technique.



Figure 2: Periareolar incision.



Figure 3: De-epithelialization of the vertical pedicle.



Figure 4: Resection of the lower medial quadrant.



Figure 5: Examination of the septal mesentery.



Figure 6: Resection of the upper pole.



Figure 7: Section of the medial and lateral pillars.



Figure 8: Placing of drains.



Figure 9: Plication of the inferior pedicle at the lower third.



Figures 10, 11: Placing of v-shaped sutures.



Figure 12: The final skin suture.

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POLYTECH

PATIENT SAFETY

BREAST REDUCTION: PERSPECTIVES ON THE INFERIOR PEDICLE AND VERTICAL PEDICLE TECHNIQUES



JAMES FERNAU - UNITED STATES
ISAPS Patient Safety Committee



THOMAS FIALA - UNITED STATES
ISAPS Patient Safety Committee

DR. FIALA ON THE INFERIOR PEDICLE

espite the increasing popularity of short-scar techniques for breast reduction, the Wise pattern reduction using an inferior pedicle remains popular in surveys among U.S. plastic surgeons. This technique offers the following advantages: predictability of results, versatility of application, and control. Disadvantages include an increased scar burden, "bottoming out" or lengthening of the N-IMF distance with time, and wound healing issues, particularly at the T-junction point. 1-3

My personal technique begins with patient selection. Previous studies show that smoking, steroid use and high BMI are all linked to higher complication rates with this procedure. ¹⁻³ Therefore, I do not offer this operation to active smokers (or those who frequently use e-cigarettes, vapes or marijuana). Former smokers must be fully smoke-free for two months. Steroid use is another contraindication. Our AAAASF-accredited facility is limited to ASA categories I and II, so patients with a BMI of >40 are not treated here. I strongly encourage pre-operative weight loss for patients with a BMI of >30.

Standard pre-op labs and EKG are obtained on patients over 40. I also obtain a pre-operative mammogram for women

over 40, assuming no additional risk factors for breast cancer, although this is controversial.^{2,3} The U.S. Preventive Services Task Force has recommended age 50 as their cutoff.

Other preparatory tips include pre-operative showers with antibacterial soap and chlorhexidine wipes to breast and axilla in pre-op holding area. Those with MRSA exposure history undergo a pre-op decolonization protocol.⁴ Multimodality analgesia is used: celecoxib, gabapentin, and acetaminophen are given orally in the pre-op area.⁵ Use of a comprehensive pre-op process checklist, as published by Rosenfield, is recommended.⁴

Marking is done in the pre-op holding area with a nurse chaperone. The patient midline, inframammary fold (IMF), and breast midline are marked as usual. The new nipple-areolar complex (NAC) location is estimated at or slightly above the Pitanguy point, but is not committed to until the T-closure has been completed in the operating room, and the patient has been checked in a near vertical sitting position. The inferior pedicle width is drawn with a wide base of 9-10 cm. I typically use a 42 mm NAC diameter. N-IMF limb length varies slightly with the desired size of the post-operative breast. For a medium C cup, it is set at 8-9 cm, which is slightly longer

than traditionally taught, to reduce tension. For women who desire a fuller C or small D size, this distance is lengthened, but does not exceed 10-11 cm. A small IMF triangle is also added to reduce tension at the T-incision. A gentle S-shape is used for the lateral flap design, to help avoid post-operative boxiness. I always check the limb lengths of the medial and lateral flaps, to make sure that the length of the flap is equal to, or slightly longer than, the corresponding distance along the IMF, and adjust marks as necessary.

Patients receive a single dose of IV Cefazolin within 60 minutes of incision.^{1,2} Vancomycin is used in case of a penicillin allergy, or for those with suspected MRSA colonization. All patients are placed on a water-filled warming blanket for temperature maintenance. Sequential compression devices are used on all patients.² Patients with a Caprini score of >5 are considered for continued postoperative DVT prophylaxis.¹

The anesthesiologist routinely uses Propofol for induction and one of several inhaled agents for general anesthesia. Nitrous oxide is avoided. Ondansetron and dexamethasone are typically administered intravenously to reduce the risk of postoperative nausea and vomiting (PONV). Patients with a history of motion sickness or PONV receive aprepitant capsules prior to surgery. To reduce intra-operative bleeding, a single 10 mg/kg dose of tranexamic acid (TXA) is given about 30 minutes prior to incision.

I like to perform ultrasound-guided PECS I and II blocks following induction. It seems to help with patient comfort upon awakening and reduces the initial need for post-op pain medications.⁵

In surgery, while external skin incisions are made with a standard 15 blade, I use electrocautery for all parenchyma dissection. My preference is the Utah Medical "Epitome" electrosurgery tip, which cuts cleanly through dense breast tissue, while providing excellent hemostasis. All incisions are injected with an epinephrine-containing solution prior to initial incision.²

Following scissor de-epithelialization of the pedicle, the lateral and medial borders of the pedicle are created with a tapered edge. Care is taken to avoid undercutting the pedicle, especially on the lateral aspect. Medial and lateral triangles are resected. Less is taken medially to preserve desirable fullness. The resection specimens are preserved on the back table to compare to the opposite side. Flap elevation is performed, with thicker flaps to maximize flap perfusion. Dissection is performed slightly below the level of

the breast capsule inferiorly, and deepens as it goes superiorly, to help preserve some desirable superior pole fullness. The T-incision is temporarily tacked together, and the resection of the other side is completed. Thereafter, the patient is sat up and assessed for symmetry of shape. Any further zones requiring adjustment are dealt with at this time and resected tissue is sent for pathology examination.³

Finally, closure is performed. I prefer using 4-0 PDS for my deep dermal closure, placed about 1 cm apart. A Laschal pattern suture cutter helps the assistant avoid palpable suture tails. No drains are used. The NAC positions are drawn and checked carefully for symmetry. The skin disk is removed, and the NAC inset with 10-12 deep dermal sutures. A subcuticular suture is placed. Recently, I have been using the bidirectional 4-0 Monoderm barbed suture for the IMF, starting a few centimeters medial to the T-incision, and a second one for the periareolar and vertical closure. The T-incision is then covered with a mesh tape/cyanoacrylate dressing for two weeks, which is flexible, waterproof and antimicrobial.

Post-operative pain meds include celecoxib, gabapentin, and if needed, oxycodone/acetaminophen. Tapentadol is substituted for those with opioid sensitivities or with a PONV history. Early postoperative ambulation is encouraged.

Standard post-operative scar care includes the use of silicone gels during the day and silicone sheets at night over the incisions for the first three months. Patients with a history of hypertrophic scarring or those with a higher level of aesthetic concern are treated with the Embrace scar therapy system. ^{6,7} Intralesional 5-fluorouracil combined with triamcinolone is used to minimize hypertrophic scars, if they are noted in the postoperative course.

DR. FERNAU ON THE VERTICAL PEDICLE

Dr. Fiala has provided an excellent comprehensive safety profile for inferior pedicle breast reduction. My technique differs in the following ways.

The decontamination protocol includes chlorhexidine showers and the application of mupirocin ointment to the ear canals, nostrils, NAC, and the umbilicus four times a day.⁸ The chlorhexidine showers and mupirocin ointment application are started five days before surgery. I use the enhanced recovery after surgery (ERAS) protocol.⁹ My use of general anesthesia also differs slightly. I do not use inhalation agents. The anesthesia team uses Propofol, dexmedetomidine, midazolam and a small amount of fentanyl on induction. I have modified the Rosenfield checklist to my practice.

40

A vertical pedicle is used with a lollipop incision. I use a superior or medial pedicle allowing for inferior wedge resection of the redundant ptotic breast tissue. Suturing the medial and lateral pillars results in coning of the breast. To accommodate for the increased projection, the new position of the superior border of the NAC is marked at the inframammary crease. Transposition of the NAC on a superior or medial dermal glandular pedicle depends on its position with respect to the mosque dome skin marking pattern. The breast parenchymal medial and lateral pillars are then closed with o-Polyglactin (Vicryl-Sutures).

Gathering the skin of the vertical wound is accomplished by using boxed stitches with 3-0 polydioxanone (PDS) sutures. I infiltrate the lateral breast tissue located underneath the arm with a superwet solution of local anesthetic incorporating a 0.1% solution of TXA. 10,11,12 I typically infiltrate 250-500 ml into the lateral breast, according to the size of the area of fullness. SAFE liposuction is performed with a power-assisted device using a 4 mm tri-port helix canula. No liposuction is performed medially. The breast parenchyma is infiltrated with 100-250 ml of this same solution. By using TXA, I avoid drains, bruising, hematomas, seromas, inflammation, and pain. Instead of using the Bovie cautery, I use a plasma knife. By doing so I have avoided seromas in over 500 patients.

In the post-operative period, the pro-fractional laser is used on scars when the redness diminishes and turns into a soft pink. This is usually 6-8 weeks post-operatively. I space the laser treatments at 4-6-week intervals and typically perform a minimum of six treatments for optimal scar reduction.

The authors have no financial interest in any company or product named in this article.

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PATIENT SAFETY

FAT NECROSIS IN BREAST SURGERIES: HIGHER INCIDENCE IN FIBROCYSTIC DISEASE (FCD) OF THE BREAST



ROY KANJOOR

INTRODUCTION

at necrosis (FN) in the breast following a breast surgery is a benign but confusing complication that needs thorough investigation to rule out malignancy. The true incidence is difficult to report. After fat grafting to the breast, the reported incidence of FN is between 2-20%.¹ Fat grafting to the breast is a different type of breast surgery in which fat cells or tissue are grafted into the breast. This is mainly done with subcutaneous fat. FN has also been reported in other surgeries involving breast tissue including breast reductions, breast implant surgeries, and breast biopsies.



Figure 1a: Patient had undergone a large breast reduction two years earlier and now presented with a hardpalpable mass under the NAC. It was a long superomedial pedicle. A small incisional biopsy found FN and FCD.

PATHOLOGY

The likely pathogenesis of fat necrosis is ischemia. When the tissue load is overwhelmed, fat cells are the first to undergo necrosis whereas the nerves can withstand hypoxia to a larger extent. This was observed when we performed large breast reductions using long pedicles. Though we observed firm to hard pedicle, which is indicative

of fat necrosis, there was good viability and sensation of of the nipple-areolar complex (Figures 1a, 1b).

The pathologic stages of retained necrotic fat lead to continued fibrosis and calcification. As necrotic fat continues to mature, it becomes fixed to the surrounding tissues.

The following types of fat necrosis were observed on patients where fat had been grafted to the breast:

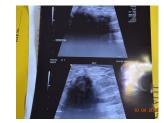


Figure 1b: Ultrasound image showing a hard mass under the NAC.

- 1. Fat oil cyst
- 2. Calcification
- 3. Nodular sclerosis
- 4. Large lumps

CLINICAL FEATURES

In our experience, we observed that hard, lumpy presentation occurred after breast reduction surgery while oil cysts occurred after fat grafting. Common symptoms among patients included pain around the breasts and visible lumps. These effects usually presented themselves anywhere from three weeks to one year after surgery.

MANAGEMENT

The protocol for determining whether fat necrosis is benign or malignant involves investigating whether there are visible lumps and pain in the breast area. An ultrasonogram or mammogram may be used to determine if there are calcified walls or cysts present and if there are any opaque areas present, which are indicative of hard areas (*Figures 2a, 2b, 2c*).



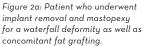




Figure 2b: Patient presented with a clearly defined mass eight months later.

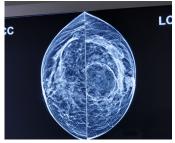




Figure 2c: Ultrasonogram images of a large oil cyst which was biopsied and showed both FN and FCD.

If the patient reports no pain or lumps in the breast, no investigation is done. Pain associated with lumps requires removal of the cyst (*Figures 3a, 3b*). Small cysts can be removed by fine-needle aspiration.



Figure 3a: 40-year-old female who had breast implant surgery five years ago and fat grafting to the breast two years ago. She developed a painful small nodule.



Figure 3b: Excisional biopsy showed a fat oil cyst and FCD.

OUR EXPERIENCE

Our observation of the coexistence of fibrocystic disease (FCD) and fat necrosis caused us to look back and explore all cases of FN that we had found. There were two large breast reductions and four fat grafting procedures where there was FCD of the breast in the clinical history and histopathological evidence of FN and FCD coexisting.

Upon discovering this, we asked patients about any potential premenstrual pain or breast enlargements, which are common symptoms of FCD. We then performed soft tissue mammograms and ultrasound exams after which we alerted patients of any presence of FCD (BI-RADS 2). We also warned patients of the likely occurrence of a lumpy breast post-surgery, whether from a breast reduction surgery, fat graft, or breast implant surgery.

DISCUSSION

FCD is a benign breast disease. There is a link between breast reduction surgery, proliferative breast disease and a reported increase in complications postoperatively.²

Indicators that were predictive of specific complications post-breast reduction surgery included a patient's body mass index (BMI), race, and mass of resection.³ Complications that may occur post-operatively include complications with the healing of a wound, decreased nipple sensitivity and hypertrophic scarring.³

Though the association between fibrotic or proliferative breast tissue and higher incidence of overall complications has been reported, this association has not been studied in relation to any single specific complication. Our research on this novel link between FCD and FN has not been reported previously in the literature. However, the association between FN and FCD can help us predict the chance of developing the disease and allow us to warn patients beforehand. Preoperative screening of the breast using BI-RADS can help us document any presence of FCD.

CONCLUSION

The rare association between fat necrosis and fibrocystic disease of the breast can help plastic surgeons better counsel patients about the likely complication of fat necrosis and its effects.

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Tel: +90 212 216 0013

Email: hello@seveneventcompany.com Website: www.eurasian2<u>O21.org</u>

ISAPS ENDORSED - 8TH LIVE SURGERY COURSE

Dates: June 24 - 26, 2021 Location: Marbella, SPAIN Venue: Hotel Barcelo Marbella Contact: Carolina Lerussi Tel: +34 952 77 53 46 Email: carolina@cirumed.es Website: livesurgery.cirumed.es

WEBINAR - USE OF SURGICAL NET IN FACIAL AESTHETIC SURGERY

Date: June 26, 2021

Time: 13:00 UTC - 15:00 UTC

Topic: Use Of Surgical Net in Facial Aesthetic Surgery Speakers: Fausto Viterbo, MD, PhD & Andre Auersvald, MD

Moderator: Ozan Sozer, MD

SECONDARY OPTIMIZING AESTHETIC SURGERY SYMPOSIUM (SOS) 2021 - ISAPS ENDORSED

Dates: September 7-8, 2021 Location: Vienna, AUSTRIA

Venue: Andaz Belvedere Vienna Hotel

Contact: Barbara Boeld Tel: +49-89-18-90460

Email: <u>Congress@bb-mc.com</u>
Website: <u>www.sos2020.eu</u>

ISAPS COURSE - HUNGARY

Dates: November 4-6, 2021 Location: Debrecen, HUNGARY

Venue: Kölcsey Convention Center Debrecen

Contact: Dr. Csaba Molnár

Tel: (+36 1) 299 0184

Email: convention@convention.hu
Website: www.isaps-debrecen2020.hu





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