21ST ANNUAL SCIENTIFIC MEETING OF THE AUSTRALASIAN COLLEGE OF PHLEBOLOGY

28 - 30 AUGUST 2021

VIRTUAL CONFERENCE HANDBOOK

THE COLLEGE

The Australasian College of Phlebology (ACP) is a modern and progressive society with a young and energetic governance, a comprehensive training program and a dedicated and passionate membership. The ACP organises annual science-driven, dynamic and innovative congresses, workshops and preceptorships.

We are proud to have introduced modern interventional treatment techniques to Australia and New Zealand in the past 25 years including ultrasound guided sclerotherapy (mid-90s), endovenous laser and radiofrequency ablation (early 2000s) and glue ablation (past 5 years).

The ACP was founded in 1993 as the Sclerotherapy Society of Australia by Dr Paul Thibault. In 1999, the Society officially changed name to the Australasian College of Phlebology to coincide with the introduction of its formal training program. Since then, the ACP has established one of the most comprehensive phlebology training programs in the world. Since 1999, the ACP has graduated dozens of venous specialists who now hold teaching, educational and board positions within the College.

The ACP actively promotes education and research in phlebology and serves the general public, governments, insurance providers, regulatory authorities and the industry as a resource regarding venous disorders. The ACP fellowship represents the multi-disciplinary nature of phlebology and includes a variety of medical specialties such as vascular surgery, dermatology, interventional radiology, haematology, vascular medicine and lymphology. Other members of the college include allied health professionals such as sonographers, scientists and nurses with a shared interest in phlebology.

IMPORTANT REMINDER

Speakers are required to log in to green room 30 minutes prior to their scheduled talk

The Australasian College of Phlebology
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Chatswood, NSW 2067
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E: events@phlebology.com.au

WELCOME

David Connor
Convenor ACP2021

Dear Colleagues and Friends,

Welcome to ACP2021 – a meeting like we've never had before.

For the first time, an ACP meeting will be available virtually. We had hoped to see you in Sydney for our normal face-to-face meeting, but for the second year in a row, we were unable to do this. We do look forward to seeing you all in person soon, but for now, we hope you find this virtual experience to be a suitable replacement for our normal meeting.

A lot of planning has gone into how to deliver our usual conference for you. Our sessions still have the same format, with presentations by local and international speakers, followed by a panel discussion where you will be able to ask questions remotely. If you miss out on a session, then you will be able to watch a recording of the session at your own convenience through the conference portal.

Sadly, we had to reschedule the Training Course for our trainees. We felt that the face-to-face support given by speakers and trainers could not be replicated in a virtual format in a way that isn't already available through the ACP training modules. We are looking to reschedule this course at a time when travel restrictions have been lifted.

Our meetings could never happen without the support of our sponsors and exhibitors. We are grateful that throughout this period, their support of the College has been unwavering. Our exhibitors are available to communicate with you throughout the meeting in the virtual exhibition. Please ensure that you take the time over the next few days to interact with them. Visit their virtual booth and arrange a time to meet with them.

Sadly, we didn't get to have our meeting in 2020 and a lot of planning went into having an event that never materialised. It was meant to be a return for ACP meetings to New Zealand. I truly hope that we get to return to New Zealand soon.

I am also eternally grateful to both Zivka and Jan from the College for delivering this conference for you. They are truly the inspiration behind the college and without them, this meeting wouldn't happen.

In the meantime, I look forward to seeing you in person all as soon as we can.

David Connor
Convenor ACP2021

INTERNATIONAL INVITED SPEAKERS

Dr Joseph A. Caprini
Vascular Physician, USA

Dr Joseph A. Caprini MD is a Senior Clinician Educator at the Pritzker School of Medicine at the University of Chicago. He is also an Emeritus physician at North Shore University Health System in Evanston, Illinois.

Dr Caprini has authored or co-authored 480 articles, book chapters, and abstracts on the study and treatment of venous thromboembolism, venous insufficiency, and related topics. He has delivered over 1,800 lectures worldwide on a variety of topics including venous thromboembolism, laparoscopic surgery, wound care and compression therapy.

His society memberships include the International Society on Thrombosis and Haemostasis, and the American Venous Forum, where he is a Distinguished Fellow and served as President 2009-2010.

He is a Distinguished Fellow of the Society for Vascular Surgery, a Founding Member and the first Honorary Fellow of the European Venous Forum, a Fellow of the American College of Surgeons and a member of the American Society of Hematology. He is Co-chair of the Technical Advisory Panel of JCAHO (2005 to date).

Dr Fedor Lurie
Vascular Surgeon, USA

Dr Fedor Lurie MD started his career as an academic vascular surgeon in 1980. He served as the faculty at the Urals Medical Academy (Russia), University of California Davis, and the University of Hawaii. He is currently the Associate Director of the Jobst Vascular Institute and Adjunct Research Professor at the University of Michigan Ann Arbor.

Dr Lurie's main clinical and research interests are venous and lymphatic diseases, venous physiology, and clinical imaging. He serves as the Director of the ABVLM, Director of the IAC Vein Center Accreditation Board, and member of the Medicare Evidence Development & Coverage Advisory Committee.

Dr Lurie is the Past President of the AVF and the AVF Foundation, member of several committees of the Society for Vascular Surgery, an Honorary Member of the EVF, and several vascular surgery societies.

He served as the principle investigator on multiple clinical trials, published more than 200 original papers, multiple commentaries and review articles, and 19 book chapters. He is also an accomplished speaker with more than 300 presentations worldwide.

Dr Aleksandra Jaworucka-Kaczorowska
Phlebologist, Poland

Dr Aleksandra Jaworucka-Kaczorowska, MD, PhD is a qualified General Surgeon, Obstetrician & Gynacologist and is currently working at the Jaworuccy Surgery Center and the Center of Phlebology and Aesthetic Medicine in Gorzów Wlkp, Poland. She graduated from the Medical University of Karol Marcinkowski in Poznań, Poland in 2004.

Dr Jaworucka- Kaczorowska obtained the title of doctor of medical sciences in 2010, the title of specialist in gynaecology and obstetrics in 2012 and the title of specialist in general surgery in 2017. Dr Jaworucka-Kaczorowska graduated the Postgraduate School of Aesthetic Medicine in Warsaw in 2019 and gained the title of the aesthetic medicine doctor.

She is the member of the Executive Committee of the Polish Society of Phlebology and a member of many Scientific Societies in Poland and abroad. Her main field of interest is superficial vein treatment, pelvic venous disorders and aesthetic phlebology.

Dr Erika Mendoza
Phlebologist, Germany

Dr Mendoza studied medicine in Spain, where she was born and raised. After her PhD in Heidelberg (Germany) she specialized in Duplex Ultrasound of Superficial Leg Veins in the Hospital, then in Courses at Ferrara and Paris. Since 1995, she has run a practise in Trujillo, Spain which specializes in venous sparing surgery (CHIVA), and since 1997 in Wunstorf, Germany where she is responsible for the duplex diagnostics and treatment (conservative, endoluminal, ultrasound guided foam sclerotherapy) for veno-lymphatic diseases and assists with surgical interventions.

She has organised Hands-on Workshops on CHIVA Strategy since 2000 and on Duplex Ultrasound since 2007. She started international cooperation and scientific investigation on anatomy and physiology in 2004 with the University of Rome, later with the Imperial College (London), the University of Bern (Switzerland) and University of Bochum (Germany), and performed and published many scientific research papers. She published her first book on superficial venous duplex ultrasound in 2006 and is co-editor of the book Saphenous Veins Sparing Strategies in Chronic Venous Disease (Springer, 2019).

Dr Lowell Kabnick
Vascular Surgeon, USA

Lowell Kabnick, MD, FACS, FAVLS, DABVLM, FAVF is the Director of Clinical Operations for United Vein Centers. Dr. Kabnick is a world-renowned board-certified surgeon and teacher who provides a patient centric approach to vein care. He was the first vascular surgeon in the United States to perform radiofrequency ablation and 1470nm laser ablation for the minimally-invasive treatment of varicose veins. He also served as the investigator in the FDA phase 2 and 3 trials for Varithena.™ Dr. Kabnick is recognized as an international authority on the diagnosis and treatment of venous disease. He is highly sought after as a consultant and teacher by medical societies around the world. He is the co-founder of Phlebobridge, Vascular Strategic Partners, and Vein and Lymphatic Teaching Network. He presently serves as Vice President for the International Union of Phlebology-North America. Dr. Kabnick has authored numerous scientific papers and book chapters and has written extensively on venous disease and treatment.

LOCAL FACULTY

A/Prof. Vivien Chen
Dr Jacqui Chirgwin
Dr David Connor
Dr Anuya Deshpande
Dr Gurjit Dhillon
Dr Joseph Grace
Dr Paul Hannah
Dr Nabeel Ibrahim
Dr Mina Kang
Dr Zachariah Kidman
Dr Gilles Laur
Dr Chris Lekich
Dr Luke Matar
Dr Lucy McKinnon
Dr Gabrielle McMullin
Dr Jarrod Newell
Dr Darren Ng
Dr Peter Paraskevas
Dr Luke Parkinson
Prof. Neil Piller
Dr Stefania Roberts
Dr Mary Swan
Dr Paul Thibault
Dr Simon Thibault
Prof. Andre van Rij
A/Prof. Laurencia Villalba

COMPRESSION for chronic venous disease and PAD / Diabetes?

medi

Merino-Plush in the entire foot

Solid ribbed structure

Unique, soft padding from above the ankles down to the tip of the toes

Extra long, flat seam

Yes, certainly!

mediven® angio – Safety down to the toes

Safety in clinical trial proven*

mediven® angio

The first and only medical compression stocking whose safety was scientifically evaluated and proven in patients with chronic venous disease and concomitant PAD and / or diabetes mellitus.*

Visit us at booth #3

* Product safety proven by clinical trial: The use of the medical compression stocking mediven angio in patients with chronic venous diseases and concomitant mild to moderate peripheral artery disease (PAD) and / or diabetes mellitus is safe.[1]

[1] Rother U et al. Safety of medical compression stockings in patients with diabetes mellitus or peripheral arterial disease. BMJ Open Diab Res Care 2020;8:e001316.

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PROGRAM AT A GLANCE

	Saturday 28 August	Sunday 29 August	Monday 30 August
0900	Opening Plenaries	Venous Interventions II: Cyanoacrylate Closure	New and Updated Classification Instruments
0930			
1000			
1030		Morning Tea	
1100	Ultrasound Insights	Innovations in Compression	Venous Thromboembolism
1130			
1200			
1230	Lunch		
1300			
1330	Lymphoedema and Lipoedema	Venous Interventions III	
1400			
1430			
1500	Afternoon Tea	Afternoon Tea	
1530	Venous Interventions I	Cases and Clinical Puzzles	
1600			
1630			
1700			

Please note that times are Australian Eastern Standard Time (AEST)

* Program subject to change

PROGRAM

SATURDAY 28 AUGUST 2021

OPENING PLENARIES

900 Introduction and Welcome to ACP2021
Simon Thibault, President of the Australasian College of Phlebology
David Connor, Convenor, ACP2021

905 Venous Disease and the Obesity Pandemic
Andre van Rij

920 When should you look for venous obstruction and when should you treat?
Laurencia Villalba

935 Thermal Ablation: Screw-ups - Tips and Tricks
Lowell Kabnick

950 EVLA vs RFA: Is there a difference between the endovenous thermal ablation technologies
Stefania Roberts

1005 Panel Discussion

1030 Morning Tea

ULTRASOUND INSIGHTS

1100 SPONSORED PRESENTATION
Using Different Techniques for Vascular Scanning
Peter Murphy
Sponsored by Canon Australia

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CANON MEDICAL

1120 Neck Vein Obstruction: Assessment and Application in a Phlebology Practice
Paul Thibault

1140 Transabdominal duplex ultrasound and intravascular ultrasound planimetry measures of common iliac vein stenosis are significantly correlated in a symptomatic population
Laurencia Villalba

1150 First experiences with the new pocket ultrasound devices
Paul Hannah

1200 Peri-vascular Tumescent Anaesthesia Fully Compresses Subcutaneous Venous Malformations but Not Intramuscular Lesions
Mina Kang

1210 Panel Discussion

1230 Lunch

LYMPHOEDEMA AND LIPOEDEMA

1330	Title TBC Speaker (TBC)
1350	Updates in Lipoedema Chris Lekich
1405	Lipoedema: New ideas, new information and a paradigm shift Neil Piller
1425	Renaming Lipedema – a Consensus Proposal Erika Mendoza
1440	Panel Discussion

1500	Afternoon Tea

VENOUS INTERVENTIONS I

1530	Endovenous laser ablation and ultrasound guided sclerotherapy for the treatment of SVI and venous leg ulcers Aleksandra Jaworucka- Kaczorowska
1550	The first 6 months of radiofrequency ablation for treatment of chronic venous insufficiency, an audit of safety and efficacy from a single centre Mary Swan
1600	Lipiodol reduces the lytic activity of detergent sclerosants *in vitro* Joseph Grace
1610	Restless Leg Syndrome an underdiagnosed disease waiting for Phlebologists to find and treat Luke Matar
1620	Cerebrospinal Venous Obstruction: Investigation and Management Paul Thibaut
1630	Panel Discussion

* Program subject to change

PROGRAM

SUNDAY 29 AUGUST 2021

VENOUS INTERVENTIONS II: CYANOACRYLATE CLOSURE

900 Cyanoacrylate (Venaplug application) for Perforator Vein Incompetence as well as Saphenous Vein and Accessory Vein Short Segment Incompetence/Groin Recurrence: A Case Series
Nabeel Ibrahim

910 Cyanoacrylate Ablation: A treatment of choice for patients with severe lifestyle limiting cardiac comorbidities
Surabh Joshi

920 Cyanoacrylate adhesion closure for small saphenous veins compared with great saphenous veins
Naoki Sakakibara

930 Glue Loves Foam: Innovative Cyanoacrylate + STDS technique for tortuous varicosities originating from truncal veins. - Stronger Together
Surabh Joshi

940 Adjunct sclerotherapy for the difficult patients with cyanoacrylate adhesion closure
Naoki Sakakibara

950 Factors affecting cyanoacrylate polymerisation - an *in vitro study*
Joseph Grace

1000 Panel Discussion

1030 Morning Tea

INNOVATIONS IN COMPRESSION

1100 Compression therapy just like you ordered! Understanding compression, its quantification and the physics at work
Luke Parkinson

1120 Give me the Wrap: Patient centred control of chronic oedema and lymphoedemas
Neil Piller

1130 Use of a wireless sub-bandage pressure monitor to improve accuracy of compression bandaging
Gabrielle McMullin

1140 Are compression therapists too superficial? An overview of the physics that govern pressure application in compression therapy and things to consider when inferring limb compression through measurements made at its surface
Luke Parkinson

1150 SPONSORED PRESENTATION
Peripheral Arterial Disease, Diabetes and Graduated compression? A new solution from medi
Alex Carver, Giovanni Mosti, Franz Schingale and Annette Erhardt
Sponsored by medi Australia

1210 Panel Discussion

VENOUS INTERVENTIONS III

1330 Treatment of veins in different body areas and its complications
Aleksandra Jaworucka- Kaczorowska

1350 Postsclerotherapy Complications
Peter Paraskevas

1400 Dealing with Sclerotherapy Extravasation - Novel method to deactivate STDS and relieve operator stress
Surabh Joshi

1410 Postsclerotherapy Pigmentation: A review and treatment with the Cutera Enlighten picosecond laser
Paul Thibault

1420 DVT and PE Post Sclerotherapy
Gurjit Dhillon

1430 Chronic Regional Pain Syndrome following UGS of Distal SSV – A Case Report
Jacqui Chirgwin

1440 Panel Discussion

1500 Afternoon Tea

CASES AND CLINICAL PUZZLES

1530 A possible case of leukocytoclastic vasculitis after sclerotherapy with polidocanol
Darren Ng

1540 MSK differential diagnoses of leg pain for the phlebologist
Gilles Laur

1550 Endovenous Therapy and the Surgical Safety Checklist
Jarrod Newell

1600 Thrombophlebitis following Candela Laser Hair Removal – A Case Report
Jacqui Chirgwin

1610 Peroneal veins or perineal veins? Should clinicians adopt fibular veins as the preferred anatomical nomenclature and discard the ambiguous synonym of peroneal veins?
Zachariah Kidman

1620 Endovenous Heat Induced Thrombosis (EHIT) The importance of communication and management of this post ablation complication
Anuya Deshpande

1630 Panel Discussion

PROGRAM

MONDAY 30 AUGUST 2021

NEW AND UPDATED CLASSIFICATION INSTRUMENTS

900 The Symptoms-Varices-Pathophysiology Classification of Pelvic Venous Disorders
Mark Meissner

920 2020 Revision to the CEAP Scale
Fedor Lurie

940 CEAP: C4-6 Pn - what is this?
Andre van Rij

950 C0s: Venous symptoms without signs
Andre van Rij

1000 Panel Discussion

1030 Morning Tea

VENOUS THROMBOEMBOLISM

1100 STATE OF THE ART
VTE Risk Assessment in the time of COVID-19
Joseph Caprini

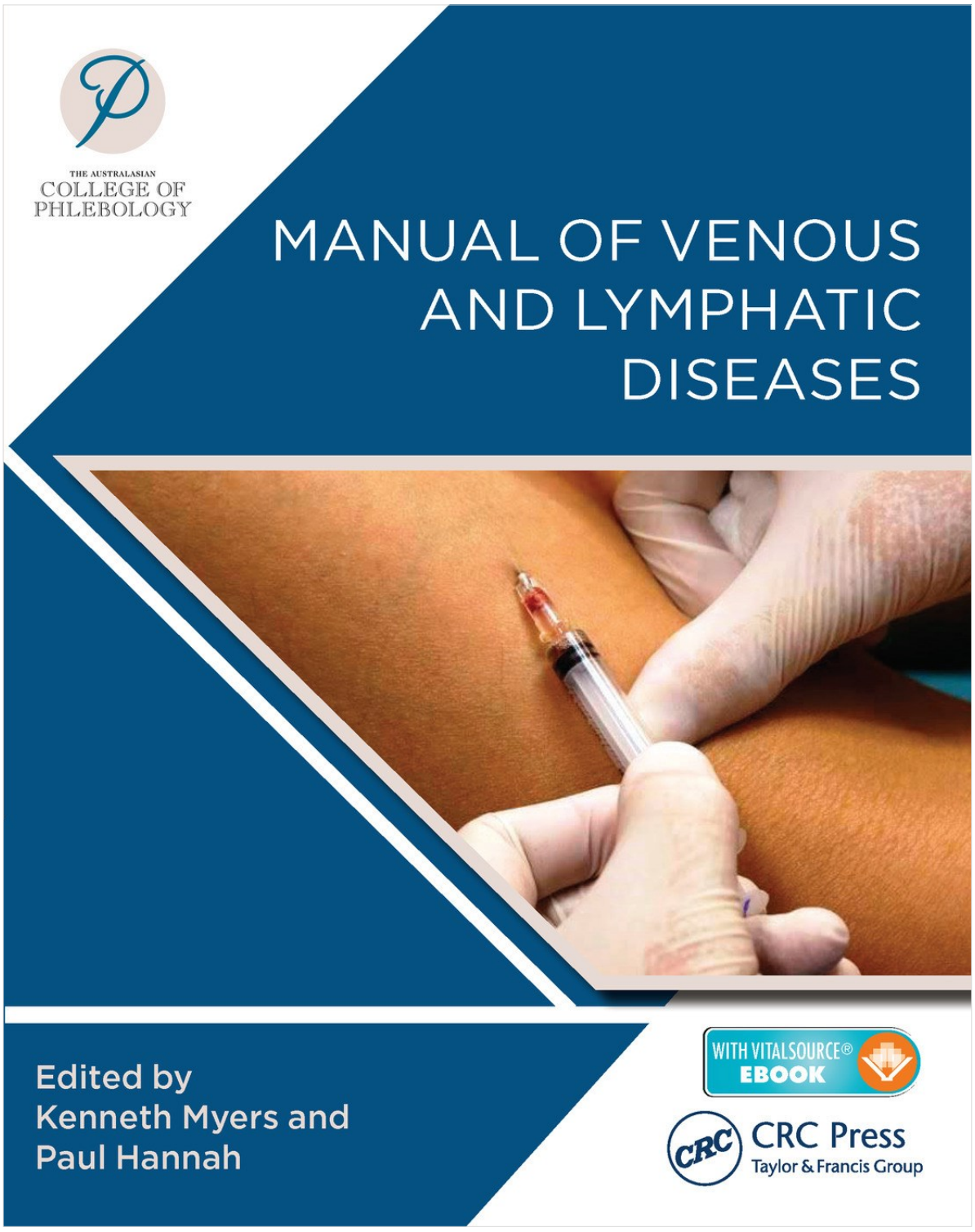
1130 The Australian Response to the vaccine induced Thrombotic and Thrombocytopenic Syndrome (TTS)
Vivien Chen

1145 Why we should treat / intervene on DVT
Laurencia Villalba

1200 Superficial venous thrombosis - a case for following the current grade 1 evidence for investigation and treatment
Lucy McKinnon

1210 Panel Discussion

1230 ACP2021 Closing



The Manual of Venous and Lymphatic Diseases constitutes a concise but comprehensive and contemporary description of the nature and management of venous and lymphatic diseases. This innovative book instructs the post-graduate trainee in phlebology and is also valuable to undergraduate students wishing to gain a broader knowledge than is available in general surgical texts. Additionally, it is a useful reference for practising phlebologists, vascular surgeons and imaging specialists. The text covers basic principles, diagnosis and treatment of chronic venous disease, venous thrombo-embolism, lymphoedema and vascular malformations.

Order online at www.phlebology.com.au

oedema institute
by SIGVARIS GROUP

Patients with venous disease

20%

20% of all adults will suffer with vericose veins

≈70%

70% of all leg ulcers are a result of venous disease

10%

10% of deaths in Australia are a result of blood clots

Venous Disease

All the backflow causes high pressure within your veins which slowly fatigue and result in venous disease.

Symptoms include:

- **Oedema**
- **Vericose veins**
- **Venous eczema**
- **Haemosiderin Deposits**
- **Telangiectasias**
- **Leg ulcers**

Treatment options include:

- **MLD (manual lymphatic drainage)**
- **Pump theraphy**
- **Cupping**
- **Bandaging**
- **Compression garments**

Whether you suffer from mild or severe venous disease, we have the right treatment for you

EXHIBITORS

The Australasian College of Phlebology would like to extend its appreciation to all of our exhibitors. Without their continued support we would not be able to bring our meetings to you year after year.

We encourage all of our delegates to visit our virtual exhibition and have a chat or organise an appointment with our exhibitors who will all have a presence in our virtual conference platform.

AMSL Regenerative Medicine

Australasian Medical & Scientific Limited (AMSL) Regenerative Medicine Division brings an autologous PRP harvesting device into Australia for use in aesthetic medicine, sports medicine, MSK, plastic surgery and veterinary science clinics. Our products, including Fibrovein a detergent based sclerosant licensed for the treatment of varicose veins; are used by dermatologists, plastic surgeons, vascular surgeons, sports and MSK doctors, vets and more.

Suzi Trajkovski
0499 077 309
Suzi.Trajkovski@amsl.com.au
amsl.com.au (AUS)

Endotherapeutics

Endotherapeutics was founded in 1999 with a small team, and a number of innovative, niche medical technologies that provided quality of life improving solutions to healthcare professionals.
Since then, hard work combined with tenacity, dynamism, drive and determination has turned Endotherapeutics into a leading Australian healthcare technologies company that operates across both Australia and New Zealand.
Over 20 years of experience has allowed Endotherapeutics to develop extensive knowledge of the Australian and New Zealand healthcare systems. This includes the registration and reimbursement of new medical technologies, and their successful sales and marketing.

Paul Sewell
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www.endotherapeutics.com.au

EXHIBITORS

Venetix / Getz Healthcare

Karen Barclay
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http://venetix.getzhealthcare.com

Getz Healthcare is a supplier of high-end products and services across Australia and New Zealand since 1965. We currently represent over 45 leading brands providing access to over 200 healthcare solutions for clinicians and patients across the region. Our extensive range of innovative, high-quality products and integrated solutions work together to create an efficient and effective working environment and enhanced patient experience.
Our venous health division covers a full range of products for Phlebology including sclerotherapy, radiofrequency ablation, and compression stockings. Visit our friendly staff in booth #8 to learn more about our complete solutions for Venous Health.

medi Australia

Alex Carver
0419 757 633
alex@mediaustralia.com.au
www.mediaustralia.com.au

medi continues to be a leader compression with innovative technology. Come and experience medi vision. With medi vision, your legs are scanned with a 3D camera, generating an exact 3D model with all relevant measurements – contactlessly – with a perfect fit. medi vision is flexible and mobile – can be used in hospitals, clinics or during home visits.

Our motto "medi. I feel better", worldwide helps people increase their quality of life: Whether it's varicose veins, or chronic wounds – medi's products and treatments contribute to treatment success for many diseases and ailments.

Medisol

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MEDISOL was founded in 2018 in Sydney, Australia with the aim of supplying high quality, reliable and cost-effective medical devices and consumables to the public and private health institutions by utilising the experience gained in the sector since 2003.
MEDISOL currently supplies fiber beam guides (radial and bare tip) will also be planning Radio Frequency Ablation systems. All products have EC, ISO and some of them FDA certificates.
MEDISOL aims to reach the target audience with most suitable price, high quality and continuous service with solutions of clinically proven, high-tech devices and consumables.

Medtronic Australia

Medtronic is a global leader in medical technology, services, and solutions. We collaborate with others to take on healthcare's greatest challenges.

Our Australasian headquarters are in Macquarie Park, in the northwest of Sydney, Australia. We have hubs in Melbourne, Brisbane, Adelaide, Perth and Auckland.

Medtronic Australasia now employs more than 800 staff across Australia and New Zealand. All are passionate about providing access to medical technology that changes the face of chronic disease.

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Sigvaris Australia

At Sigvaris, we care about people. Our history and experience with compression products goes back more than 150 years. For almost 60 years, Sigvaris medical compression solutions have offered effective and reliable support for vascular conditions. Anywhere, anytime. For everyone.

Ultimately, we are dedicated to helping people feel their best. Everyday!

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www.sigvaris.com

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Venosan

VENOSAN Compression Stockings are manufactured by Lohmann & Rauscher (L&R), a leading manufacturer of high-quality, innovative wound management, compression products as well as operating room consumables & apparel. L&R has over 160 years' experience around the world, focusing on providing solutions that meet clinician and patient needs. In Australia, L&R operates closely with our partner distributor Medical Accessories of Australia to support clinicians, ensuring positive outcomes for patients. With brands such as VENOSAN®, ReadyWrap™ and Rosidal®, L&R & Medical Accessories of Australia are uniquely placed to provide compression solutions throughout the entire patient journey, from the acute to maintenance phase.

☎ Robyn Wight
0416 773 288
Robyn.Wight@au.LRMed.com
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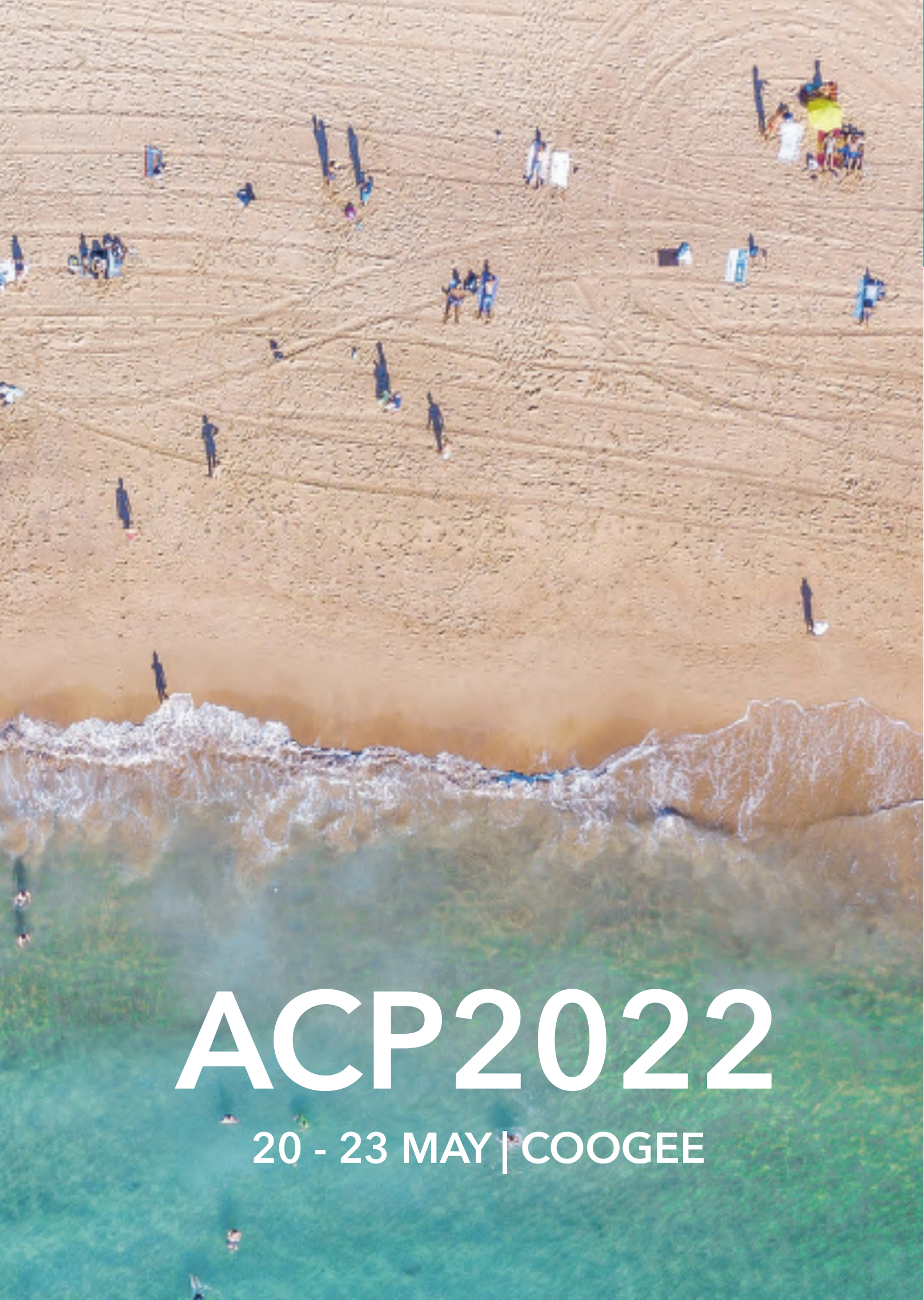

ACP2022

20 - 23 MAY | COOGEE

INFORMATION

DELEGATES

All delegates will be sent the link to access the conference virtual platform closer to the date. It will also be available from the conference website the day prior. You will be required to log in with the same credentials used when registering for ACP2021 online.

Compatible Browser

All presenters and attendees are required to connect to the platform using the latest version of Google Chrome or Microsoft Edge.

Delegate Troubleshooting

Please go to the conference website to view the troubleshooting guide should you encounter any issues accessing the virtual platform.

Make sure you have the correct log in details you registered with, if you do not remember them you can use the forgotten password link on the virtual platform homepage.

New Zealand Hub

A NZ Hub has been set up for delegates from New Zealand. It is located at QT Auckland and will be open on Saturday 28 and Sunday 29 August. Only those who have registered can attend.

QT Auckland
4 Viaduct Harbour Avenue
Westhaven, Auckland 1010, New Zealand

Be mindful that our program is in Australian Eastern Standard Time, so the stream will commence 11am both days in Auckland.

Recordings

Delegates will be able to access the conference recordings from the virtual platform approximately one week after conference has finished.

SPEAKERS

All speakers are required to do a pre-conference check with our AV technicians Congress Rentals. Details have been sent to all speakers to schedule this check and is important that it is performed to optimise what delegates will see and get you used to the virtual environment.

Ensure you use the same computer during your presentation as was used for the speaker check.

Make sure you are in a quiet space and let those around you know that you are unavailable to avoid sudden interruptions.

YOU MUST LOG IN TO THE SPEAKERS GREEN ROOM 30 MINUTES PRIOR TO YOUR SCHEDULED TALK!

Speaker Troubleshooting

If you are having any problems accessing the green room let us know immediately.

Internet

High quality internet connection, preferably a wired Ethernet connection for presenters. Both download and upload speeds are important. Recommended 5mbps Download/Upload

Audio Device

It is strongly recommended that an external microphone is used. This can be a USB microphone, headset, or pair of headphones with an inline microphone.

ABSTRACTS

SATURDAY

OPENING PLENARIES

When should you look for venous obstruction and when should you treat?

Dr Laurencia Villalba

Venous obstruction contributes considerably to the burden of disease for patients and healthcare services but is under researched and undertreated. Venous stenting is increasingly offered worldwide as more evidence accumulates supporting its safety, efficacy, and durability. The indications are still evolving, but it is clear that certain patients with iliofemoral or caval venous obstruction, acute or chronic, can avoid or abolish pain, swelling and chronic non-healing ulcers and enjoy a better quality of life. Identifying those patients, following standardized protocols and meticulous technique are all critical components of a successful outcome.

Thermal Ablation: Screw-ups, tips and tricks

Dr Lowell S. Kabnick

Minimally invasive methods for ablation of the saphenous veins, such as endovenous laser ablation (EVLA) and radiofrequency ablation (RFA), have emerged as the gold standard treatment for patients with varicose veins. This has also allowed for the transition of these patients from the hospital setting to the ambulatory setting. However, shortly after the introduction of the endothermal technique, new complications were identified. The most common and most disturbing adverse events in the literature were burns, nerve injury, arterio-venous fistula (AVF), endothermal heat-induced thrombosis and deep venous thrombosis. Many of these complications identified can be avoided with the use of proper surgical technique and appropriate duplex ultrasound guidance. Overall, RFA and EVLA has an excellent safety profile and is considered among the first line for treatment of superficial venous reflux. Since the evolution of minimally invasive endothermal venous ablation, one of the most common complications identified was EHIT. This adverse event is defined as thrombus propagation from the treated saphenous vein into the adjacent deep vein. It was clear from the very beginning that there was a need to understand the natural history of this complication, develop a classification and treatment algorithm. Kabnick developed the EHIT classification early, primarily used today, followed by a Lawrence classification. The American Venous Forum has adopted Kabnick's EHIT classification with a minor change to Class 1.

AVF-EHIT Classification

Class	Definition
I	Thrombus without propagation into the deep vein A. Peripheral to superficial epigastric vein B. Central to superficial epigastric vein, up to and including the deep vein junction.
II	Thrombus propagation into the adjacent deep vein, but comprising < 50% of the deep vein lumen.
III	Thrombus propagation into the adjacent deep vein, but comprising > 50% of the deep vein lumen.
IV	Occlusive deep vein thrombus contiguous with the treated superficial vein.

AT THE SAME TIME THE AVF/SVS GUIDELINES COMMITTEE DEVELOPED THE FOLLOWING EHIT GUIDELINES:

Guideline 1.1: Classification System for EHIT
We suggest the use of a classification system to standardize the diagnosis, reporting and treatment of EHIT. [BEST PRACTICE]

Guideline 1.2: Classification System based on Duplex Ultrasound
We suggest that the venous duplex ultrasound with the patient in the upright position, performed within one week of the index procedure, forms the basis for the classification system. [BEST PRACTICE]

Guideline 1.3: Kabnick Classification System
We suggest consideration of the Kabnick Classification for reporting of EHIT at the saphenofemoral (GSV) or saphenopopliteal (SSV) junctions. [BEST PRACTICE]

Guideline 1.4: Lawrence Classification System
We suggest consideration of the Lawrence Classification for reporting of EHIT at the saphenofemoral (GSV) or saphenopopliteal (SSV) junctions. [BEST PRACTICE]

Guideline 1.5: AVF-EHIT Classification System
We suggest preferential use of the unified AVF-EHIT Classification system to standardize ongoing reporting given that it maintains the essence of the Kabnick and Lawrence classification systems, remains recognizable, and may be used for ongoing meta-analyses and systematic reviews. It is a four-tiered classification: (I – junction, II - < 50% lumen, III - > 50% lumen, IV – occlusive deep vein thrombosis (DVT)). [BEST PRACTICE]

Continued next page.

Continued…

RISK FACTORS AND PREVENTION
Guideline 2.1: Risk factors for EHIT
Some possible but inconsistent predictors or risk factors for EHIT include large GSV diameter, previous history of venous thromboembolic disease, male gender. These may be considered in the pre-procedure phase, but the evidence is inconsistent. [GRADE – 2; LEVEL OF EVIDENCE - C]

Guideline 2.2: Prevention of EHIT with chemical prophylaxis
The use of chemical prophylaxis for prevention of EHIT should be tailored to the patient after an assessment of the risks, benefits and alternatives. [GRADE – 2; LEVEL OF EVIDENCE - C]

Guideline 2.3: Prevention of EHIT with mechanical prophylaxis
The use of mechanical prophylaxis for prevention of EHIT should be tailored to the patient after an assessment of the risks, benefits and alternatives. [GRADE – 2; LEVEL OF EVIDENCE - C]

Guideline 2.4: Prevention of EHIT by increasing ablation distance
There is a trend towards decreased EHIT when ablation is initiated greater than 2.5cm from the saphenofemoral (GSV) junction or saphenopopliteal (SSV) junctions. [GRADE – 2; LEVEL OF EVIDENCE - C]

TREATMENT OF EHIT
Guideline 3.1: Classification System
We suggest the stratification of treatment based on an accepted EHIT classification system. [BEST PRACTICE]

Guideline 3.2: Treatment for EHIT I
We suggest no treatment or surveillance for EHIT I. [GRADE – 2; LEVEL OF EVIDENCE - C]

Guideline 3.3: Treatment for EHIT II
We suggest no treatment of EHIT II, but do suggest weekly surveillance until thrombus resolution. In high risk patients consideration may be given for antiplatelet therapy versus prophylactic or therapeutic anticoagulation with weekly surveillance. Treatment would cease following thrombus retraction or resolution to the saphenofemoral (GSV) or saphenopopliteal (SSV) junctions. [GRADE – 2; LEVEL OF EVIDENCE - C]

Guideline 3.4: Treatment for EHIT III
We suggest treatment with therapeutic anticoagulation for EHIT III, weekly surveillance, and cessation of treatment following thrombus retraction or resolution to the saphenofemoral (GSV) or saphenopopliteal (SSV) junctions. [GRADE – 1; LEVEL OF EVIDENCE - B]

Guideline 3.5: Treatment for EHIT IV
We suggest that treatment should be individualized, taking into account t the risks and benefits to the patient. Reference may be made to the CHEST guidelines for the treatment of DVT. [GRADE – 1; LEVEL OF EVIDENCE - A]

MANAGEMENT OF SSV
Guideline 4.1: Management of EHIT for the SSV
We suggest that management and treatment for EHIT as it relates to the SSV parallels that for the GSV. [GRADE – 2; LEVEL OF EVIDENCE - C]

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Neck Vein Obstruction: Assessment and Application in a Phlebology Practice

Dr Paul Thibault[1]
[1]*CVCMC*

Introduction: The objective of this review is to describe firstly the normal venous outflow from the brain via the neck veins and cerebrospinal venous system, then secondly the assessment of neck vein obstruction using a quantitative duplex ultrasound examination (QDUE). The practical application of the QDUE in a phlebology practice is then described.

Method: The normal patterns of flow in the neck veins is described and guidelines for interpretation of the QDUE of the extracranial neck veins are developed. The QDUE is performed in the supine and sitting positions and the blood volume flows in the internal jugular veins (IJVs) and vertebral veins (VVs) are recorded. Measurements in the 2 positions is essential in order to detect obstruction in the cerebrospinal venous circulation (Table1). The detection of abnormal collateral flow is generally of importance in the assessment.

Result: An infective cause of neck vein obstruction is proposed and from a literature search of the role of the obligate intracellular bacterium Chlamydophila pneumoniae (Cpn) in vascular and chronic diseases, a diagnostic protocol for confirming chronic persistent Cpn infection which includes the QDUE and specific blood tests is suggested. The specific blood tests required are serum Cpn serology, FBC, CRP, fasting serum lipids, liver function tests, and serum Fe studies. From the results of the QDUE and blood tests, a diagnostic "algorithm" can be developed to reliably diagnose a chronic Cpn obstructive vasculitis in the cerebrospinal venous system.

Conclusion: Neck vein obstruction is associated with a few common chronic diseases, but due to its silent progression is generally overlooked by medical practitioners. Awareness and assessment of neck vein obstruction is likely to play an important role in the management of these chronic diseases in the future.

Transabdominal duplex ultrasound and intravascular ultrasound planimetry measures of common iliac vein stenosis are significantly correlated in a symptomatic population

Dr Laurencia Villalba

The objectives of the present study were to determine the validity of transabdominal duplex ultrasound (TAUS) against the reference standard of intravascular ultrasound (IVUS).

Methods: data from patients who had undergone IVUS investigation and TAUS because of symptoms of chronic venous insufficiency and a high suspicion of IVO were correlated. These included the TAUS-measured minimum and maximum diameter and the percentage of stenosis with the IVUS-measured minimum and maximum diameter and area and the percentage of stenosis.

Results: The TAUS and IVUS data from 47 patients (83% female; age, 49.3 ± 17.3 years; 64% obese) were included in the analyses. We found 89% agreement between the TAUS and IVUS findings regarding the identification of left CIV stenosis of ≥50%. The TAUS data had a positive predictive value of 95.5%. The TAUS measures of the minimum diameter and percentage of stenosis correlated significantly with the IVUS measures of the minimum diameter, minimum area, and cross-sectional area of the percentage of stenosis. The strongest correlations were between the TAUS-measured minimum diameter and IVUS-measured minimum area and percentage of the area of stenosis according to the literature-derived value. The TAUS-measured vein diameter of 8 mm equated to an IVUS cross-sectional area of 94.2 mm (53% stenosis), and an IVUS cross-sectional area of 50% of stenosis equated to a TAUS diameter of 8.56 mm.

Conclusions: The findings from the present study support the validity of TAUS evaluation as a workup diagnostic tool for the detection of IVO. Our findings also support the use of TAUS planimetry—in particular, the CIV diameter of ≤8 mm as a threshold value—to indicate clinically relevant stenosis and trigger an IVUS investigation with an intention to treat, because this correlated with a cross-sectional area stenosis of ≥50%, as determined by IVUS examination.

SATURDAY

ULTRASOUND INSIGHTS

First experiences with the new pocket ultrasound devices

Dr Paul Hannah

The presentation summarises the state of play with new cheap pocket ultrasound devices, their technology, their quality, and possible uses for them in general medicine and in particular phlebology.

Lipoedema: New ideas, New information and a Paradigm Shift

Professor Neil Piller[1]
[1]*Flinders University*

Introduction: In 2018/19 various groups of lymphology experts from around Europe, lead by Dr Tobias Bertsch, from the Foldi Clinic, met to discuss the need for a new consensus regarding lipoedema. The reason for this was an increasing concern that lipoedemas were often confused with lymphoedemas and for this reason lipoedema patients were often sent along the wrong treatment and management path.

These meetings culminated in the recent Consensus publication in the Journal of Wound Care in November 2020. In the forward by Prof Hugo Partsch. he indicates that in lipoedema there is no oedema nor is there any lymphatic insufficiency or failure. He indicates concern that because of these misunderstandings and confusion with lymphoedema that patients may be recommended for lymphatic decongestive therapy. He further indicates it is of concern that there is a lack of homogeneity in terms of how patients are treated and strongly suggests we need to review and consider the elimination of older ideas and concepts some of which have no scientific proof but which seem to be ingrained within ourselves and the literature.

My presentation will mirror the contents of the JWC consensus and ask us to re think our actions regarding lipoedema, its underlying pathophysiology and treatments. The major areas of often questionable concepts include, the notion that there is oedema in lipoedema, the notion that lipoedema makes people fat, that weight loss has no effect on lipoedema, that lipoedema is progressive and that liposuction is effective for lipoedema leading to long-lasting results.

When we look at these "myths" as they call them even I look and think "How can our established doctrines be wrong"? I was sceptical. Some of the issues and differences are linked to our terminology and staging and typing of the condition no doubt but a review of the evidence behind the contents of the JWC document shows it to be very strong and a good base for a consideration for change.

Conclusion: This presentation will put forth the basic areas of potential controversy in terms of the myths behind some of our knowledge and decisions. You (as I did) will feel uncomfortable but its time perhaps for the paradigm shift that they claim is necessary so we can "bring the patient's real symptoms to the forefront, allowing for more comprehensive and sustainable treatment". Its back to the patient as an individual!

Endovenous laser ablation and ultrasound guided sclerotherapy for the treatment of SVI and venous leg ulcers

Dr Aleksandra Jaworucka-Kaczorowska[1]
[1] *Center of Phlebology and Aesthetic Medicine, Gorzów Wlkp, Poland*

Introduction: Endovenous laser ablation (EVLA) is a treatment of choice for incompetent superficial truncal veins but timing of varicosity treatment is still controversial. Patients seek for treatment because of symptoms but more often because of cosmetic appearance. Especially in this group, fast and satisfactory results are expected, therefore the comprehensive approach to the treatment is nowadays mandatory. Moreover, the multiple sites of reflux are often found during the whole-leg duplex mapping. The aim of this study is to evaluate the safety and efficacy of EVLT with concomitant sclerotherapy for superficial vein incompetence.

Method: This is a 24-month prospective observation of 576 patients with superficial vein incompetence treated with simultaneous EVLA and sclerotherapy. Demographic information, distribution and extent of venous reflux, clinical and procedural data, treatment complications were collected on a customized database and analyzed. The occlusion rates of treated veins were evaluated with duplex ultrasound. Patients clinical improvement and satisfaction were assessed by CEAP classification, venous clinical severity score (VCSS) and on Visual Analogue Scale (VAS:1-10).

Results: Of 576 patients included at baseline, 76% were females, with median age of 47 years (IQR 18-88). The 1-month, 6-month, 12-month, 24-month follow-up rates were 100%, 96.5%, 91.8% and 86.4%, respectively. The complete occlusion of truncal vein was found in 97.1%, 98.7%, 99.2%, 99.6% at 1-, 6-, 12-and 24- month follow-up, respectively. Additional sclerotherapy sessions were required in 32 patients (5.6%) due to: residual varicosities 5%, incompetent perforating veins 3.5%, partial occlusion of truncal vein 1.7% and fully patent vein 1.6%, and mostly in C5 (20%) and C6 patients (24.3%). 31.9% of patients requested additional sclerotherapy session due to C1 changes. The reported complications at a 1-month follow-up included visual disturbance 1.5%, migraine 0.7%, hyperpigmentation 13.9%, superficial thrombophlebitis 4.7%, peripheral edema 5.2%, paresthesia 1.7%, matting 2.9%, skin necrosis 0.7% and were mostly transient. Permanent hyperpigmentations were found in 2.1% at the 12-month and 1% at the 24- month follow-up. There was significant improvement in CEAP and VCSS ($p<.001$) for all time intervals. Patient satisfaction of the treatment was high, with a median satisfaction of 9.5 on a VAS:0–10 scale. 98,3% said they would like to have this procedure again.

Conclusion: One stage treatment is not only the patient preference but is also a valid, safe and effective treatment for superficial vein incompetence with significant clinical improvement and high posttreatment patient satisfaction. Hybrid approach increases the treatment possibilities and efficacy with acceptable risk increase.

The first 6 months of radiofrequency ablation for treatment of chronic venous insufficiency, an audit of safety and efficacy from a single centre.

Dr Mary Swan[1]

[1]*Palm Clinic, New Zealand*

Methods: A detailed retrospective review of prospectively maintained electronic patient database was performed to include the first six months of subjects treated at Palm Clinic, Auckland with radiofrequency ablation (RFA) for chronic lower limb venous insufficiency.

Clinico-demographic and outcome data were collected over the time period patient from 1st June 2018 to 1st Dec 2018. Absolute inclusion criteria included only those with complete follow-up to one year.

Results: 250 patients were included with 309 vein segments treated. 100 % had early post-treatment imaging. One treatment failure was recorded in one patient at day one. There was one non closure at 12 months. There were no major complications recorded. Oral antibiotics were prescribed for 2 minor access site infections.

Conclusion: RFA is a safe and effective method for treating varicose veins in an outpatient vein clinic setting. Major complications are rare.

Lipiodol reduces the lytic activity of detergent sclerosants in vitro

Dr Joseph Grace, Dr David Connor, Prof. Lourens Bester, Dr Christopher Rogan, Prof. Kurosh Parsi
St Vincent's Centre for Applied Medical Research, Darlinghurst, NSW, Australia

Introduction: Contrast agents are used widely in the interventional setting and in particularly in the management of vascular anomalies and have also been used in combination with sclero-embolic agents. There is limited information on the interaction of contrast agents with sclerosant agents when used as mixtures. The aim of this study was to determine the effect of mixing radiological contrast agents with detergent sclerosants and measuring the effect on change in lytic activity of detergent sclerosants in vitro and by proxy the change in potency.

Method: Red blood cell lysis was assessed following the incubation of two commonly used contrast agents, LIPIODOL® and ULTRAVIST®, mixed with detergent sclerosants, FIBROVEIN®, sodium tetradecyl sulfate (STS), and AETHOXYSKLEROL®, polidocanol (POL).

Results: The density of both contrast agents was higher than STS and POL and neither of the detergent sclerosants were miscible in LIPIODOL. LIPIODOL on its own caused cell lysis (1.01%, $p < 0.05$) whereas ULTRAVIST did not. Fifty per cent cell lysis for sclerosant and LIPIODOL mix occurred at concentrations of: 0.041% (2.4 times greater than the control, $p < 0.05$) and 0.08% (3.6 times greater than the control, $p = 0.06$) for STS and POL, respectively.

Conclusions: LIPIODOL, when mixed with sclerosant detergents (ratio 1:1) causes a reduction in the lytic activity of sclerosants and this effect was statistically significant and most prominent in lower sclerosant concentration mixtures.

Restless Leg Syndrome an underdiagnosed disease waiting for Phlebologists to find and treat.

Dr. Luke Matar[1], Mr Ryan Kelaart[1]
[1]*The Vein Clinic*

Objective: Prospective study to investigate incidence of RLS (restless leg syndrome) in patients presenting for clinic-based treatments for superficial venous insufficiency (SVI) and the influence of treatment on RLS.

Methods: International RLS (IRLS) rating scale questionnaires were completed at presentation and at follow up 6 weeks post treatment in patients treated at an outpatient phlebology clinic. All patients were subjected to clinical examination and Duplex Ultrasound (DU) evaluation initially and at 6 weeks post treatment. RLS was diagnosed if IRLS scores were >0/40. SVI was diagnosed when retrograde flow (reflux) > 0.5 s on augmentation was demonstrated in the superficial veins. In all cases of saphenous reflux (GSV/SSV/AASV) treatment of truncal incompetence was via Endovenous laser ablation (EVLA) utilising a 1470nm diode laser and single ring radial fibre delivering an average linear energy of 75j/cm. A pull back device was used in all cases to ensure uniform energy delivery. Branch vessels disease was treated on a separate occasion with either Ultrasound Guided foam sclerotherapy (UGFS) alone or Ultrasound Guided foam sclerotherapy and concomitant ambulatory phlebectomy (UGFP).

Results: Between Jan 2020 and March 2021, 121 (84 female and 37 male patients with an average age 46.5 yrs) completed IRLS questionnaires prior to and at 6 weeks post treatment for SVI. The primary treatment comprised EVLA in 84 % (102/121), UGFS in 14% (17/121) and UGFP in 1.65% (2/121). IRLS pre-treatment scores ranged from 0 (n=31) to 39 (n=1). Post treatment scores ranged from 0 (n=60) to 32 (n=1). Overall, 74% (90/121) of these undergoing treatments were diagnosed with RLS (IRLS>0). Post treatment 32% (29/90) of those with RLS had a score =0 at 6 weeks and 99% (89/90) had some improvement in RLS score. Overall average initial IRLS was 18 (moderate RLS) with average post treatment score 6 (mild RLS). 65% of females and 74% of males had scores reduce by 10 points or more.

Discussion: Many patients did not have a pre-existing diagnosis of RLS prior to completing the IRLS questionnaire and were unaware of the condition despite having high RLS scores. This warrants further evaluation in this ongoing prospective study.

Conclusion: RLS is an under recognised condition that has strong links to SVI and usually responds to treatment of underlying SVI. Routine monitoring of RLS scores by phlebologists is encouraged given the increasing need to justify treatments to qualify for government/health funding.

Cerebrospinal Venous Obstruction: Investigation and Management.

Dr. Paul Thibault
[1]CVCMC

Objective: Cerebrospinal venous obstruction (CSVO) is a relatively common venous obstructive condition that is invariable overlooked but in fact is associated with many chronic conditions that have diverse vascular manifestations. The condition appears to have a chronic infective vasculitis origin possibly due to the obligate intracellular parasite Chlamydia pneumoniae (Cpn).

Method: This presentation outlines the diagnostic protocol required to make the diagnosis of CSVO due to Cpn and the strategies that can be used to effectively monitor and treat the condition.

Results: Several cases will be presented to illustrate the investigation and management of CSVO.

Conclusion: Awareness and understanding of CSVO has the potential to reduce the adverse effects and complications associated with the condition in the long-term.

Cyanoacrylate (Venaplug application) for Perforator Vein Incompetence as well as Saphenous Vein and Accessory Vein Short Segment Incompetence/Groin Recurrence: A Case Series.

Prof. Nabeel Ibrahim[1,2], Dr Alexander Bay[1], **Dr Omar Rodriguez[1]**, Dr Marcela Toazza[1]
[1]Advanced Laser Vein Clinic, [2]Macquarie University Hospital

Introduction: Treatment of symptomatic perforator vein incompetence has always been a quandary among clinicians even with the current scientific evidence. The most common cause of recurrence after treatment of incompetent superficial veins is perforator vein insufficiency. Current advancements in minimally invasive treatments have replaced the traditional open surgical procedures. The use of cyanoacrylate closure for incompetent perforator vein (IPV) have long been proven feasible. This study will describe a novel technique to treat IPV and short segmental incompetence/recurrence of saphenous veins and assess its outcome in a case series.

Objective: To describe the 'Venaplug' technique in the treatment of perforator vein incompetence and GSV, SSV and AASV short segment incompetence/recurrence and review the outcomes of a series of cases in a single outpatient centre.

Method: A Case Series study of patients who were treated with 'Venaplug' technique in a ambulatory setting and were reviewed to assess its anatomical and clinical outcomes. Ultrasound findings before and after the procedure were compared and assessed (over a time period) for its anatomical results. Clinical outcomes however were correlated with other adjunct procedures such as VenasealTM, sclerotherapy and pinhole phlebectomy for its overall clinical success scores.

Results: A total of 34 patients were included in the study. There were 17 males and 17 females with the average age of 56.1 years. A total of 9 GSV, 3 SSV, 7 AASV, 2 Giacomini and 45 perforators were treated with Venaplug technique. The cohort were followed up at 1 week, 4 weeks, 3 months, 9 months and 1 year. 1 GSV treated recanalised at 6 months follow up, 1 AASV at 3 weeks and 2 perforators treated recanalised at 2 months and 1 year post procedure. There were no incidence of superficial phlebitis and DVT nor any evidence of cyanoacrylate spill into the deep venous system.

Conclusion: The study demonstrated that the 'Venaplug' technique is effective, safe and with relative ease of use in treating perforator vein incompetence and GSV, SSV and AASV segmental incompetence/recurrence.

Cyanoacrylate Ablation: A treatment of choice for patients with severe lifestyle limiting cardiac comorbidities.

Dr Saurabh Joshi[1], Dr Purva Khandelwal[1], Dr Rohit Basapure[1], Dr Rahul Arkar[1]
[1]*The Vein Center*

Introduction: Cyanoacrylate based non thermal treatment methods, VenaSeal were introduced in India in 2019. Before this time, high risk patients, even those with venous ulcers could not be offered any treatment as thermal methods would be too risky, and open surgery was contraindicated. Cyanoacrylate based ablation method - VenaSeal has brought down the procedure risk and allowed such high-risk patients to avail definitive treatment.

Methods: An observational study was conducted on 25 patients with cardiac comorbidities like chronic heart failure, valvular heart diseases with pulmonary hypertension, history of multiple MI, use of anti-platelet therapy due to Atrial fibrillation who were treated using Venaseal for varicose veins and change in their parameters (Heart rate, Blood pressure) intra-operatively and post-procedure outcome in terms of patient satisfaction and post-op recovery times were noted.

Results: The changes in HR/BP of the patients undergoing Venaseal were less than 5% from the baseline. Also, the patient satisfaction score was >8/10 in all the patients. The postoperative recovery and discharge to home time was less than 2 hours for all the patients.

Conclusion: Cyanoacrylate based ablation method is safer as compared to conventional thermal treatment in high cardiac risk patients.

Cyanoacrylate adhesion closure for small saphenous veins compared with great saphenous veins

Dr Naoki Sakakibara[1], Dr. Rie Yagi[2], Dr. Tomohiro Imai[3], Dr. Hiroyuki Miyagawa[1]
[1]Department od Cardiovascular Surgery, Edogawa Hospital, [2]Department of Cardiovascular Surgery, Juntendo University, [3]Tokyo Vascular and Vein Clinic

Introduction: SSVs are exposed to higher venous pressure and more mechanical stress especially at the popliteal region than GSVs. Cyanoacrylate adhesion closure (CAC) is indicated for both GSVs and SSVs, although comparison of outcome between them is unknown. The objective is to evaluate the difference in the outcome of CAC between GSVs and SSVs.

Methods: Multicenter, retrospective observation study was conducted with 427 patients of saphenous vein reflux. Mean age of 66 (SD12), 287 females (67%), median CEAP C grade of 3, mean VCSS of 4.5 was recorded. A total of 494 legs were treated; 419 GSVs and 75 SSVs. Mean truncal diameters were 7.4 mm (SD2.4) in GSV group and 7.5 mm (SD2.3) in SSV group. Turkish glues were used in 486 legs (98.4%), while Venaseal was used in 4 legs (0.8%). Outcome and postoperative adverse effects were compared up to 1 year.

Results: Volume of cyanoacrylate and procedure time were comparable between two groups. Incidence of hypersensitivity was also comparable as less than 2.0%. Incident of phlebitis-like abnormal reaction was not significantly different as well, although GSV group revealed 12% compared with 2.5% in SSV group. 1 year closure rates were 97.3% in GSV group and 94.7% in SSV group respectively. Unsuccessful CACs were observed with 11 legs (2.6%) in GSV and 4 legs (5.3%) in SSV. Eight symptomatic patients with unsuccessful GSV CAC were re-treated in the second session and all GSVs were successfully occluded at last. Although 3 symptomatic patients with unsuccessful SSV CAC were re-treated, two SSVs were reopened again after the second session and surgically ligated at last. Those patients with repeatedly reopened SSV revealed venous hypertension and leg edema with deep vein dilatation.

Conclusions: There was no significant difference between GSV and SSV. However, the complete CAC failure was observed in 2 legs after repeated SSV treatment. Excessive mechanical stress at the adhesion interface caused by venous hypertension is a possible mechanism for peeling off. Large vein diameter with venous hypertension would be one of risk factors for unsuccessful CAC in SSV.

Glue Loves Foam: Innovative Cyanoacrylate + STDS technique for tortuous varicosities originating from truncal veins. - Stronger Together.

Dr Saurabh Joshi[1], Dr Rohit Basapure[1], Dr Santosh Patil[1], Dr Rahul Arkar[1], Dr Purva Khandelwal[1]
[1]*The Vein Center, Mumbai*

Introduction: To develop a technique to achieve consistent and reliable closure of dilated varicosities arising from superficial truncal veins that close suboptimally with Sclerotherapy or Cyanoacrylate ablation alone.

Methods: A prospective study is being conducted at our centers to develop a technique to achieve consistent and reliable closure of dilated varicosities arising from superficial truncal veins like the GSV, AAGSV, SSV, and their large tributaries. The need for a better technique was felt when it was found that 50 % of patients undergoing stand-alone sclerotherapy for large dilated tortuous varicosities or standalone Cyanoacrylate ablation of truncal veins showed some degree of recanalization. We started the study on 1st December 2019 and is ongoing till the present date. Patients first underwent Cyanoacrylate Ablation (VenaSeal Medtronic) for incompetent GSV, SSV, AAGSV and other accessory trunks. All patients with large dilated varicosities measuring more than 5 mm in diameter and arising from these trunks were selected.

The VenaSeal catheter was positioned in such a way as to direct the glue towards the origin of varicosity. The distal end of the varicosity was then accessed with a standard intracath. Sodium Tetradecyl Sulphate Foam was injected into varicosity after ablating the origin with VenaSeal. Sufficient STDS foam was injected so as to fill varicosity in its entirety. Patients were advised to wear tight compression stockings for 2 months post-procedure.

Results: The study thus far shows that 45 of the 50 patients who have been followed up after 3 months of the procedure showed consistent closure of the treated varicosities. 4 patients required follow-up sclerotherapy. 1 patient developed DVT and required oral anticoagulation.

Conclusions: The Cyanacrylate + STDS Foam method for large tortuous varicosities gives better results than when done mutually exclusively.

Adjunct sclerotherapy for the difficult patients with cyanoacrylate adhesion closure

Dr Naoki Sakakibara[1], Dr. Rie Yagi[2], Dr. Tomohiro Imai[3], Dr. Hiroyuki Miyagawa[1]
[1]Department of Cardiovascular Surgery, Edogawa Hospital, [2]Department of Cardiovascular Surgery, Juntendo University, [3]Tokyo Vascular and Vein Clinic

Introduction: Cyanoacrylate adhesion closure (CAC) is avoided for the treatment of very superficial truncal veins, because phlebitis-like abnormal reaction (PLAR) is frequently observed after CAC. In addition, an incomplete delivery of cyanoacrylate glue in the extra-large varicose veins would be a risk factor of recanalization afterwards. To improve the outcome of those difficult patients, the adjunct sclerotherapy is combined with CAC in the same session. The objective is to evaluate the outcome of adjunct sclerotherapy for the difficult patients with a simple CAC.

Methods: Multicenter, retrospective observation study was conducted in 44 patients with adjunct sclerotherapy with simultaneous CAC for the very superficial truncal vein reflux. Mean age of 69 (SD12), 29 females (62%), median CEAP C grade of 3, mean VCSS of 3.6 were recorded. A total of 45 legs were treated; 40 GSVs and 5 SSVs. Mean truncal vein diameter was 7.9 mm (SD2.4) and mean maximum vein diameter was 15.0 mm (range: 6.4-27.9). Turkish glues were used in all legs; 14 legs (30%) with catheter-based CAC, 27 legs (57%) with percutaneous CAC and 4 legs (13%) with both techniques. Adjunct sclerotherapy was performed from the introducer sheath of catheter-base CAC or percutaneous injection. Outcome and postoperative adverse effects were evaluated up to one year.

Results: Adjunct sclerotherapy was performed through the sheath in 15 legs (33%) and with percutaneous injection in 30 legs (67%). Foam sclerotherapy compounded with air or carbon dioxide was performed in 40 legs (85%) and liquid sclerotherapy were performed in 5 legs (15%). Mean foam volume was 7.0 mL (SD 2.6) and mean volume of liquid polidocanol was 2.5 mL (SD 1.5). 0.5% polidocanol was used in 42 legs (93.3%) even with a vein diameter less than 10 mm. Mean cyanoacrylate volume was 2.4 mL (SD 0.9). There was no hypersensitivity in all patients and PLAR was observed in 2 legs (4.3%). 1-year closure rate was 95.6% and bilateral GSVs in one patient were reopened 6 months after CAC. Since this patient was asymptomatic, reintervention has not been scheduled for more than one year.

Conclusions: Adjunct sclerotherapy with CAC was safe and effective for the treatment of superficial truncal veins. 0.5% polidocanol was used for the most superficial truncal veins, because cyanoacrylate adhesion blocked the blood stream and narrowed the vein lumen where lower polidocanol concentration is effective. Thus, advantage of this procedure would be to lower cyanoacrylate volume and polidocanol concentration.

SUNDAY

INNOVATIONS IN COMPRESSION

Compression therapy just like you ordered! - Understanding compression, its quantification and the physics at work

Dr Luke Parkinson
Parkki Pty Ltd, Adelaide, Australia

Compression therapy is one of the few medical practices where the therapeutic 'dose' is poorly quantified. The degree of pressure applied to an oedematous limb generally hinges on a bandaging practitioner's skills or well designed and fitted garments. Sub-bandage pressure measurement is seldom performed and may be very misleading. This has fed much confusion in the literature.

In this presentation the physics that underpin the compression of a limb using different methods yielding different results will be discussed. We will cover some experimental work demonstrating the action of Laplace's Law through distributed pressure measurements made on the skin surface and how these measurements can be used to infer core limb pressure. A new, affordable interfacial pressure sensor that provides reliable measurements of compression will be discussed, along with some other tools that may assist the experienced or trainee practitioner in achieving a well-defined pressure or pressure gradient.

Above all, I hope to equip attendees with an understanding of how a bandage or garment applies pressure and the influence limb curvature has on applied versus measured pressure values as well as provide the relevant background information to make informed judgements on many aspects of pressure application and on new and published pressure data.

Give me the Wrap: Patient centred control of chronic oedema and lymphoedemas

Professor Neil Piller

Flinders University, South Australia, Adelaide

Compression is the main-stay of treatment for chronic oedemas/lymphoedemas as long as there are no "Red Flags" such as cellulitis, Cardiac or Pulmonary issues, DVT etc. Bandaging is an important part of the initial intensive treatment phase, along with Lymphatic drainage, skin care etc.

Following this the patient moves into a management phase where they and their partner/carer take more responsibility under the guidance of a trained therapist or practitioner. As part of this garments are usually prescribed and there is no doubt that when correctly selected and fitted and they are of the right pressure and pressure gradient and if the limb has been "prepared" for their donning (or doffing) they will help the patient with control of the swelling and often other co-morbidities. However, garments can loose their ability to deliver the pressure needed as the limb reduces and importantly as the material of the garment irrespective of the type (knit and fabric) begins to loose some of its elasticity. So, what this can mean is that the limb equilibrates at a given reduction level, when there still may be an opportunity to further reduce it. A garment of a particular prescribed pressure can be difficult to don/doff and so compliance or adherence to their use can be poor. Garments are necessary and need to be replaced from time to time, but often they are not so they become less effective

This is where wraps can assist. Wraps are generally available for arms/legs and feet/hands. Wraps have range of "sections" each of which can be adjusted by the patient under guidance from their practitioner. The adjustments are made by use of Velcro straps and often tags which show what the pressure is likely to be when a Velcro strap is tightened or loosened. Any pressure adjustment can be linked to the time of day, but more importantly, it can be adjusted as the limb reduces. This can overcome the need for a new traditional garment and as the patient has control there is likely to be more compliance. The negative of this is the patient may not select the right pressure but good communication with a therapist can ensure compliance.

Does the increasing presence of wraps herald a new addition to our treatment of chronic oedemas/lymphoedemas? Give me the wrap and we'll find out!

Use of a wireless sub-bandage pressure monitor to improve accuracy of compression bandaging.

Dr Gabrielle McMullin[1]
[1]*South Sydney Vascular Centre*

Introduction: Compression bandaging is a cornerstone of treatment for healing of venous ulcers and a pressure of 50-60mmHg has been determined to be the most effective pressure in subjects with a normal arterial supply. At present the application of pressure beneath an applied bandage is an unknown except with the use of expensive sub-bandage pressure devices that are attached to an external device. The aim of this study was to show that a wireless device applied at the medial gaiter region beneath the bandage that transmits pressure applied to a mobile phone improves the accuracy of compression bandaging.

Methods: A pressure monitor (compressive®BT) was applied to the B1 region of the leg of a volunteer. 54 nurses (hospital nurses, community nurses and nurse practitioners) were asked to apply a 3 layer compression bandage (a padding layer, a crepe bandage and a short stretch bandage) to the leg over the monitor. Initially this was done "blindly" with no recourse to feedback from the device.On the second application they were allowed to visualise the pressure on a display on a mobile phone.

Results: The range of pressure achieved in the first, blinded, application of the bandage was 12 - 76mmHg. 27% nursing staff achieved a pressure of 50-60mmHg.On the second application with feedback from the pressure monitor, 59% achieved a pressure of 50-60mmHg. Nurses expressed that they are often afraid of applying bandages tightly and reported that the monitor gave them more confidence.

Conclusion: This wireless sub-bandage pressure monitor changes the "art" of compression into a science and allows therapeutic levels of compression to be achieved and monitored. It would also allow patients, nurses and physicians to monitor when a compression bandage needs to be changed. In addition it would allow a lower level of compression to be safely applied to subjects with impaired arterial supply but who also require compression.

Treatment of veins in different body areas and its complications

Dr Aleksandra Jaworucka-Kaczorowska[1]
[1] *Center of Phlebology and Aesthetic Medicine, Gorzów Wlkp, Poland*

Introduction: Sclerotherapy has been satisfactorily used for the treatment of with superficial venous reflux, both telangiectasias (C1) and varicose veins of the lower extremities (C2-C6). Although it seems to be safe and minimally invasive, reports of side effects and complications have been published. The aim of the study was to describe and report incidence and frequency of side-effects and complications of liquid and foam sclerotherapy in patients with C1 to C6 in CEAP classification and to analyse the results with reference to literature.

Methods: 5187 sessions of sclerotherapy (CEAP C1- 22,75%, C2- 52,36%, C3- 4,61%, C4- 14,77%, C5 1,41%, C6-4,11%) among 3414 patients of median age 53 (interquartile range IQR 16-92) were carried. Data on local and systemic complications immediately after the sclerotherapy session and after 1, 6, and 12 months were obtained and analysed with reference to literature.

Results: The complications were divided into local and general complications. Hyperpigmentation and matting were the most common local complications (16,96% and 9,44%, respectively), but were usually transient (permanent 1,4% and 0,6%). 74,4% hyperpigmentations dipappeared in 6 months, 94,3% in a year. Other local complications included also superficial thrombophlebitis (4,42%), pyodermia gangrenosum (0,62 %) and cutaneous necrosis (0,68%). Pyodermia gangrenosum appeared after telangiectasies and reticular veins sclerotherapy, US- guided foam sclerotherapy of incompetent tributaries and tumescence assisted long catheter US- guided foam scleotherapy.

Cardiovascular and general complications included deep vein thrombosis (0,59%), which was usually distal (96,43%) and neurological complications, such as visual disturbances (1,58%) and migraine (0,7%). Transient ischemic attacks were not observed. One patient (0,0002%) had epileptic seizure with apnea and cardiac arrest which was diagnosed as Sudden unexpected Death in Epilepsy (SUDEP) and one (0,0002%) had anaphylactic shock. Cardiac toxicity (0%) were rarely observed.

Conclusion: Sclerotherapy is safe and effective method of treatment of patient with C1 to C6 but we should be aware of the possible local and systemic complications.

Dealing with Sclerotherapy Extravasation - Novel method to deactivate STDS and relieve operator stress

Dr Saurabh Joshi[1], Dr Rohit Basapure[1], Dr Santosh Patil[1], Dr Rahul Arkar[1], Dr Purva Khandelwal[1]
[1]*The Vein Center*

Purpose: Extravasation of STDS during percutaneous sclerotherapy of varicosities can result in tissue necrosis leading to ulcerations. Various agents such as normal saline, hyaluronidase, etc. were being used as a bailout to contain the damage caused by extravasated STDS. We propose a novel no-cost easily available agent which can be used to deactivate the extravasated STDS thereby preventing tissue damage.

Methods: 20 consecutive patients of varicose veins who underwent percutaneous sclerotherapy and had an incidence of extravasation during the procedure were included in this study. The novel agent was locally injected under real-time ultrasound guidance as soon as extravasation of STDS was noticed. The patients were followed up for a period of 2 months.

Results: The novel agent could be available on an instant basis during the procedure. The average time duration between extravasation and injection of the novel agent at the site of interest was less than 5 minutes. None of the 20 patients developed skin necrosis/ulcers during the follow-up period.

Conclusions: Accidental extravasation of the sclerosing agent can cause avoidable suffering to the patient and anguish for the operator. This readily available deactivating agent prevents skin necrosis and enables the operator to rest easily without the constant apprehension of possible skin necrosis and operator heartache.

Postsclerotherapy Pigmentation: A review and treatment with the Cutera Enlighten picosecond laser

Dr Paul Thibault[1]
[1]CVCMC

Introduction: Postsclerotherapy pigmentation (PSP) is a common sequela of sclerotherapy to varicose and telangiectatic leg veins. This pigmentation is primarily due to haemosiderin deposition in the dermis. Optimum technique will reduce the incidence of PSP but is has been shown that patient factors such as total body iron stores reflected in serum ferritin levels may explain why some patients are more prone to develop pigmentation. A number of published studies have shown that targeted laser treatment directed at haemosiderin deposits in the dermis can be an effective treatment for refractory PSP. Recently a new class of laser which delivers laser energies in pulses measured in picoseconds has been developed. Picosecond lasers use pulse durations of less than 1 nanosecond, which causes predominantly photoacoustic damage rather than photothermal destruction of pigment . This results in effective clearance of abnormal pigment, while minimising photothermal damage to the surrounding tissue.

Method: A review of the nature and mechanism of PSP will be presented. The principals of selective laser treatment of skin pigmentation will be described and the advantages of using a picosecond laser with a wavelength of 532nm for the treatment of refractory PSP will be proposed.

Results: A clinical case of extensive refractory PSP treated with the Cutera Enlighten picosecond laser will be presented.

Conclusions: A picosecond laser selectively destroys the target pigment without damaging normal tissue. This allows rapid clearing of the abnormal pigmentation with minimal collateral damage to surrounding tissue. The Cutera Enlighten picosecond laser adds another dimension to the effective management of refractory PSP. However, the additional cost and reduced availability of picosecond lasers currently restricts their widespread use.

DVT and PE Post Sclerotherapy

Dr Gurjit Dhillon[1]
[1]*Vein Care*

Introduction: 41 years old on the pill developed DVT and PE 8 days after second session of sclerotherapy.

Case Details: She consulted for symptomatic varicose veins of the legs, spider veins of the legs. She first noticed veins after taking the contraceptive pill increased during pregnancy. On specific questioning regarding past venous history the patient revealed no history of phlebitis, DVT, pulmonary embolism, thrombophilia, has never required warfarin or clexane.

Past Venous History: She had no previous treatment for her leg veins.
Medical history: She suffers from migraines once in couple of months.
Family history: She has a family history of varicose veins, spider veins.
Gynaecological history: She was gravida 2 ,para 2.She is on the pill Estelle for the last 12 months for heavy periods.
Social history: She is in de facto relationship, social drinker. Her occupation is Police Officer.
There were bilateral reticular veins,venules and spider veins more confined to left lateral subdermic system.
Duplex Scan: Both Right and Left Leg
Sapheno Femoral Junction was competent. Greater saphenous vein measured 3.5 mm it was competent. No Anterior accessary saphenous vein. Small saphenous vein was competent it measured 3.0 mm.
A communicating vein ie thigh extension or giacomini was not identified. Calf perforator veins were not identified.
Deep veins of the left leg appeared normal with no evidence of deep venous insufficiency.
Treatment/Plan: As Doppler and Duplex scan demonstrated no incompetence of truncal or branch veins. In my opinion given the history and examination findings I consider Carla to be a good candidate for direct vision sclerotherapy to achieve a successful outcome.

Tuesday March 30 2021 09:48:23
DIRECT VISION SCLEROTHERAPY and MICROSCLEROTHERAPY
Left Leg
Treatment no:1st
Aethoxyskelerole
1% ---------- 5.0 ml
0.3% ---------- 12.0 ml
the patient then had a Grade 11 compression stocking applied .

Tuesday April 13 2021 10:52:33
DIRECT VISION SCLEROTHERAPY and MICROSCLEROTHERAPY
Right Leg
Treatment no: 2nd
Aethoxyskelerole
1% ---------- 4.0 ml
0.3% ---------- 9.0 ml
Localised Thrombectomies
the patient then had a Grade 11 compression stocking applied.

8 days after second session of sclerotherapy She started with left sided chest pain in the morning by that evening she became breathless and taken to hospital by ambulance . She had Duplex Venous Scan, VQ Scan confirming bilateral pulmonary emboli. She had raised D-dimer.

Conclusion: She was discharged on 24/4/2021. She was commenced on Apixaban 5 mg BD now on Apixaban 5 mg daily. I have arranged her to see a Haematologist in mid June with view to possibly screen for thrombophilia

Chronic Regional Pain Syndrome following UGS of Distal SSV – A Case Report

Dr Jacqui Chirgwin

Ultrasound Guided Sclerotherapy is a common procedure performed on thousands of patients world wide with a low complication profile. Chronic Regional Pain Syndrome is an extremely rare but potentially catastrophic complication requiring early assessment and treatment in order to reduce the risk of long term morbidity. This case report highlights the signs and symptoms of CRPS and outlines treatments available for this rare but extremely serious complication.

A possible case of leukocytoclastic vasculitis after sclerotherapy with polidocanol

Dr Darren Ng[1]
[1]*Lasers In Medicine*

Introduction: Leukocytoclastic vasculitis (LCV) is a condition characterized by inflammation of small blood vessels and palpable purpura. Its presentation post-sclerotherapy is extremely rare.

Case Details: We report a presentation of probable LCV in a 70-year-old caucasian female patient who developed marked vasculitic rash and leg ulceration two weeks after ultrasound guided sclerotherapy with 1% Polidocanol foam. Histological examination revealed small vasculitis of leukocytoclastic type, with infiltration of neutrophils into the blood vessel walls, endothelial cell prominence and fibrinoid change. Direct immunofluorescence was negative. The patient's condition worsened despite oral corticosteroids and at seven weeks after sclerotherapy she was hospitalised. She was diagnosed with a secondary staphylococcal infection, which required seven weeks of intravenous antibiotics. There was no evidence of systemic vasculitis. Recovery was gradual and at four months, all ulcerated lesions had healed.

Conclusions: Although half of LCV cases are idiopathic, drugs and infection are the next most common causes. There has, to the best of our knowledge, been no cases of LCV after sclerotherapy reported in literature. The factors which lean towards a diagnosis of LCV in this case will be discussed.

MSK differential diagnoses of leg pain for the phlebologist

Dr Gilles Laur[1]
[1]*Venus vein centre*

Leg pain is a common presentation in the world of phlebology. Either due to a chronic venous insufficiency or a venous thrombo-embolic event as a cause, patients suddenly discover varicose veins that they perhaps hadn't paid attention before.

Leg pain being the commonest complaint in chronic venous disorders , this often leads to the association, that the varicose vein is the origin of the pain. It may puzzle physicians as the intensity of the pain is not correlated with the severity of venous disease, and patients sometimes complain of symptoms without signs. Typical clinical signs of varicose veins are itching, swelling, feelings of heaviness, skin changes. To understand the pathophysiology of venous pain, we need to take into account the properties of the nociceptors, as well as the inflammatory mechanisms that characterise venous disease from its early stages. The likely trigger for these mechanisms is local hypoxia caused by venous hypertension. Although leg pain can also encompass neurologic, muskuloskeletal, arterial, connective tissue and lympho-lipedemic disorders as a cause of the pain. This presentation will describe venous reasons for leg pain and its differential diagnosis.

Endovenous Therapy and the Surgical Safety Checklist.

Dr Jarrod Newell[1]
[1]*Vein And Skin Clinic, New Zealand*

Introduction: The surgical safety checklist has been used for a number of years with proven impact on morbidity and mortality in the surgical setting. While Endovenous procedures are typically low risk, there is a case for a modified Endovenous Surgical Safety Checklist, for improved safety and risk reduction both for the patient and the clinical team.

Case: Historical case of a 47 year female, 2009. The team became partially distracted just prior to the initiation of the EVLA therapy. The team were about to start the laser when it was noticed the plastic catheter was still in the the vein and the laser fiber was still in the catheter. Fortunately this was noticed. This near miss prompted the team at the Vein and Skin Clinic to perform a pre-EVLA checklist which has since expanded to include a more extensive checklist.

Conclusion: Despite Endovenous therapy having an impressive safety profile globally, the profession should always be seeking new methods to enhance safety. The proven Surgical Safety Checklist may be adapted to suit individual practices and Endovenous techniques as a quick and simple method to reduce harm and improve outcomes for both the patient and the clinical team.

Thrombophlebitis following Candela Laser Hair Removal – A Case Report

Dr Jacqui Chirgwin

Laser Hair removal is a common procedure which in the eyes of the public is both a low risk procedure and one which requires little in the way of consideration of other medical interventions. Candela laser hair removal is recommended as "safe" as close as 2 weeks following varicose vein treatment.

I present a case of marked thrombophlebitis following Candela Laser Hair Removal along the path of varicose veins, which were successfully treated by Ultrasound Guided Sclerotherapy several months before.

This case highlights the need for a more standardised approach to patient recommendations regarding the timing of these two common procedures. In addition, the wavelength of the laser utilised for the hair removal may need to be considered as part of these recommendations.

Peroneal veins or perineal veins? Should clinicians adopt fibular veins as the preferred anatomical nomenclature and discard the ambiguous synonym of peroneal veins?

Dr Zachariah Kidman[1]
[1]*Skin Institute*

Introduction: This case report of a fibular (peroneal) vein DVT will be used as an opportunity to discuss anatomical nomenclature of a lower limb deep vein.

Case details: A patient experiences a peroneal vein DVT after ultrasound guided foam sclerotherapy for lower limb varicose veins. Fibular veins is anatomically synonymous with peroneal veins in the Terminologica Anatomica of The Federative International Programme for Anatomical Terminology. Peroneal vein is a widely used term. The anatomical term peroneal veins is similar in the written and spoken english language to perineal veins of the groin/perineum. The similar spelling and pronunciation of peroneal and perineal introduce the possibility of errors in clinical communication, documentation and decision making. Anatomical terminology should be precise and consistent and avoid synonyms.

Conclusion: This presentation makes the argument that clinicians and anatomists should use the term fibular veins as the preferred anatomical nomenclature and discard the ambiguous synonym of peroneal veins.

Endovenous Heat Induced Thrombosis (EHIT) The importance of communication and management of this post ablation complication.

Dr Anuya Deshpande[1]
[1]*Cosmetic and Veins Clinic*

Introduction: Endovenous ablation using either laser or radiofrequency ablation is a widely accepted practise for closure of the great saphenous veins in patients with varicose veins. The possible complications include ecchymoses, pain, deep or superficial venous thrombosis and Endovenous heat induced thrombosis (EHIT)

Case Details: A female patient developed an EHIT Class III of the proximal GSV extending into her SFJ following ablation with bare tip laser. This case describes the post treatment detection and subsequent management of the EHIT. This highlights the need to educate sonographers not familiar with this post treatment complication and for communication with patient's primary care physicians as to the management of this condition.

Conclusion: EHIT are a potential complication of endovenous ablation. The detection, management and communication of this complication with sonographers, patients and non-phlebology trained physicians is extremely important.

MONDAY

NEW AND UPDATED CLASSIFICATION INSTRUMENTS

The Symptoms-Varices-Pathophysiology classification of pelvic venous disorders.

Mark H Meissner, Neil M Khilnani, Nicos Labropoulos, Antonios P Gasparis, Kathleen Gibson, Milka Greiner, Lee A Learman, Diana Atashroo, Fedor Lurie, Marc A Passman, Antonio Basile, Zaza Lazarshvilli, Joann Lohr, Man-Deuk Kim, Philippe H Nicolini, Waleska M Pabon-Ramos, Melvin Rosenblatt

As the importance of pelvic venous disorders (PeVD) has been increasingly recognized, progress in the field has been limited by the lack of a valid and reliable classification instrument. Misleading historical nomenclature, such as the May-Thurner, pelvic congestion, and nutcracker syndromes, often fails to recognize the interrelationship of many pelvic symptoms and their underlying pathophysiology. Based on a perceived need, the American Vein and Lymphatic Society convened an international, multidisciplinary panel charged with the development of a discriminative classification instrument for PeVD. This instrument, the Symptoms-Varices-Pathophysiology ("SVP") classification for PeVD, includes three domains-Symptoms (S), Varices (V), and Pathophysiology (P), with the pathophysiology domain encompassing the Anatomic (A), Hemodynamic (H), and Etiologic (E) features of the patient's disease. An individual patient's classification is designated as $SVP_{A,H,E}$. For patients with pelvic origin lower extremity signs or symptoms, the SVP instrument is complementary to and should be used in conjunction with the Clinical-Etiologic-Anatomic-Physiologic (CEAP) classification. The SVP instrument accurately defines the diverse patient populations with PeVD, an important step in improving clinical decision making, developing disease-specific outcome measures and identifying homogenous patient populations for clinical trials.

Why we should intervene in DVT

Dr Laurencia Villalba

Long-term morbidity and associated health care costs from post-thrombotic syndrome is clearly recognized but massively under-reported. Despite the high volume of research activity in this field for many decades, advances have been slow. Regarding early thrombus removal for acute lower extremity and upper extremity deep venous thrombosis (DVT)guidelines have suggested a selective approach to intervention, carefully balancing risks and benefits for individual patients. The key to better selection is the ability to predict which patients are at greatest risk of developing significant post-thrombotic syndrome and which patients might benefit the most from intervention. While the published trials have been lukewarm in their support for aggressive thrombus removal, technology is advancing constantly and improved technical success with novel thrombus removal approaches, IVUS imaging combined with appropriate stenting of underlying venous obstruction can translate into better medium and long-term outcomes.

MONDAY

VENOUS THROMBOEMBOLISM

Superficial venous thrombosis - a case for following the current grade 1 evidence for investigation and treatment.

Dr Lucy Mckinnon[1]
[1]*Geelong Veins, Skin and Laser*, [2]*Epworth Emergency Department*

Introduction: Previously considered a benign condition there is evidence to support more aggressive investigation and management of SVT. Prior research has proven there is disparate management of SVT between general practitioners and vascular surgeons. This case prompted a rigorous discussion in journal club about the approach to investigation and management of SVT. The author works in emergency medicine and has subjectively observed that emergency physicians have a less aggressive approach to investigation, management and followup of SVT than phlebologists.

Case details: A 55 year old otherwise healthy man with a history of provoked DVT 20 years prior presented with an SVT in his right lower leg. Duplex ultrasound examination demonstrated thrombosis in almost every deep and superficial vein below his knee. He later revealed a family and personal history of a thrombophilia which he had no further details about. He was commenced on therapeutic rivaroxaban, NSAIDS and compression. He was referred to a haematologist who recommended against extensive malignancy screening, and to a vascular surgeon. The outcome of these consults is pending.

Conclusion: SVT patients have co-existent DVT or PE in approximately 25% of patients. Despite the evidence that SVT is no longer considered a benign condition there continues to be lack of consensus in the management of SVT, and the ideal treatment is still uncertain. A summary of the current guidelines will be presented.

Surgical management of extensive DVT - 4 year experience.

Dr Rui Feitosa[1], A/Prof Laurencia VILLALBA[1], Dr Tam NGUYEN[1], Dr Andrew BULLEN[1]
[1]*The Wollongong Hospital*

Introduction: Although anticoagulation and compression are considered the mainstream treatment of acute extensive deep vein thrombosis (DVT), a significant number of patients evolve with residual limb swelling and debilitating post thrombotic syndrome (PTS). In June 2015, our Vascular Unit commenced using pharmaco-mechanical thrombectomy (PMT) for the surgical management of extensive DVT. In this study, we report 4 years of our experience.

Methods: Between June 2015 and June 2019, patients referred with symptomatic extensive DVT were commenced on intravenous heparin and taken to our hybrid vascular theatre where urokinase or alteplase thrombolysis and thrombectomy were performed using the Angiojet system. 30 minutes dwell time was allowed before thrombectomy. Post thrombectomy venous patency was assessed with on table venogram and residual stenosis was treated with ballooning/stenting. In some cases, we also used IVUS to allow more accurate stent placement. Outcomes included improvement of limb swelling and patency on venous duplex.

Results: 80 consecutive cases of symptomatic extensive DVT (61 iliofemoral veins and 19 subclavian vein) were managed surgically. Limb thrombosis at presentation was on average 12 days old (5-21 days). Intra-operative success was achieved by reducing clot burden and re-establishing adequate venous drainage of the affected limb. 90% of iliofemoral DVT cases demonstrated areas of venous stenosis that required stenting. These areas of stenosis were scaring in the veins likely secondary to previous DVTs or May-Thurner Syndrome. All subclavian DVT cases proved to be secondary to thoracic outlet syndrome and proceeded to 1st rib resection on the next available theatre list. Objective improvement of limb swelling occurred soon after intervention, including in immediate post-op. Follow up venous duplex at 4 and 12 weeks showed 93% primary patency. No bleeding complications or PE occurred. Early in the series, one patient developed acute renal impairment with eventual full recovery.

Conclusions: This series review shows that PMT with Angiojet is safe and effective in the management of acute extensive DVT, specially in those cases resistant to standard medical management. Venous stenting is often required to correct the mechanical cause of the iliofemoral DVT. In upper limb DVTs, stenting was not used but rib resection was essential to avoid recurrences. Long term surveillance, compression and anticoagulation are required for maintenance of patency of affected venous segments.

Flip the Device: Retrograde below-knee access for GSV and SSV Cyanoacrylate Abation- Novel method to treat ulcer base venous stasis for faster healing.

Dr Santosh Patil[1], **Dr Saurabh Joshi[1]**, Dr Rohit Basapure[1], Dr Rahul Arkar[1], Dr Purva Khandelwal[1]
[1]*The Vein Center, Mumbai*

Introduction: Incompetent below-knee great saphenous vein and short saphenous vein under the base of chronic venous stasis ulcers of the leg, especially around the ankle are often undertreated when traditional thermal ablation methods are employed due to technical and operational limitations. This results in delayed healing, non-healing, and recurrence of the ulcers. We hereby present our experience with the use of cyanoacrylate adhesive-based ablation (VenaSeal) of below-knee LSV and SSV in a retrograde fashion to ensure faster and complete healing of the ulcers.

Methods: The study included twenty-six patients with chronic C6EpAsPr ulcers with incompetent truncal veins under the ulcer base. Retrograde access was obtained in the truncal vein below the knee and the VenaSeal catheter was directed as distally as possible in the dilated truncal vein below the ulcer base. Patients were advised to continue routine dressing of the wound following the ablation procedure and were followed up on post op days 7 and 30 with ultrasound, and subsequent weekly visits until the wound healed.

Results: Twenty-six patients (15 men and 11 women), had an average ulcer size of 5 cm2. No post-procedure complications were recorded after adhesive-based endovenous ablation. The average healing time of the ulcers was 28 ± 11 days. A subgroup of 20 patients showed no recurrence of ulcers during the follow-up period of 2 years.

Conclusion: Adhesive-based endovenous ablation of incompetent below knee truncal veins under the base of chronic venous stasis ulcers of legs performed in a retrograde fashion achieves faster and complete healing of the ulcers.

A prospective study looking at the prevalence of diagnosed cases of chronic venous insufficiency in Aboriginal and Torres Strait Islanders in and around Cairns

Dr Alex Lapenga, Dr Venus Hedayathi, Dr Kevin Daynes, Dr Paul Hannah

Introduction: Chronic venous disease in the western population has been extensively researched. 23 % of adults in the US have varicose veins and when telangiectasias and reticular veins are considered that incidence jumps to 80% in men and 85% in women(1). There is a paucity of research data on the prevalence of Chronic venous disease in the Aboriginal Community and Torres Strait Islander in Australia. This study aims to provide an estimate of the prevalence of Chronic venous disease in members of the ATSI community in Cairns based on reported Doppler Ultrasound scans conducted at 2 large radiology clinics in Cairns. Cairns has a population of 165,525 people as of April 2018(2). Aboriginal and Torres Strait Islander peoples comprise 9% of the total population of Cairns(3).

Aims: This study aims to provide a snap shot of the prevalence of chronic venous disease amongst the ATSI community in Cairns.

Methods: Design:This study is designed as a cross sectional prospective study looking at Doppler venous Ultrasounds in two leading radiology centres in Cairns. Inclusion criteria: Confirmed Varicose veins on Doppler venous ultrasound of ATSI peoples living in Cairns and the Tablelands regions. Doppler scans of patients with confirmed venous ulcers. Ethical approval will be sought from the Far North Queensland Human Research Ethics Committee and the Australian Institute of Aboriginal and Torres Strait Islander Studies. De-identified data that confirms a diagnosis of varicose veins in an Indigenous patient from any of the four radiology centres will be utilised to provide a prevalence figure in comparison to the rest of the local population with confirmed varicose veins on venous doppler ultrasound.

This data will be analysed to provide an estimate of the prevalence of Chronic venous disease in the ATSI population in Cairns.

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Lipoedema: conservative management designed to provide a long term pain-relief

Dr Gilles Laur
[1]*Venus Vein Centre*

Introduction: Lipoedema is a painful adipose tissue disorder. It presents as a symmetrical swelling of the extremities due to subcutaneous fat deposition in the buttocks, thighs, legs, and arms, sparing the hands and feet. Patients with lipoedema suffer from pain, easy bruising, tenderness, and disproportion between trunks and limbs. Pain is the leading symptom in lipoedema. The pain is associated with depression and impaired quality of life. A pain reduction approach should be the first major therapeutic goal. The conservative management approach and its impact on pain reduction is reviewed here.

Methods: Conservative treatments encompass a complete array of no-surgical procedure including lifestyle changes (better nutrition and more moderate exercise), mechanical (Manual Lymphatic Drainage, compression garments and compression pumps). Those treatments are cost effective and easy to start .

Results: Complete decongestive therapy (CDT) treats both lymphedema and lipoedema. CDT consists of manual lymphatic drainage (MLD), exercise, compression bandaging, compression garments, and skin care. CDT decreases pain in lipoedema by decongesting sthe welling, encouraging normal lymphatic vessel pumping.

Conclusion: Conservative management program can be invaluable for individuals with lipoedema. Anti-congestive treatment reduce pain and swelling , and help to prevent the progression of lipoedema. Providing a well designed with education, decongestive treatment, and an effective home program can create hope and a higher quality of life.

Cyanoacrylate Embolization of Perforator Incompetence

Dr Ganesha Param[1]
[1]*Doctor Vein*

Introduction: Incompetent perforator veins have always been linked to chronic venous insufficiency, recurrence of varicose veins and development of ulcers. Historically, the only method available has been by open surgery. Guidelines from the American Venous Forum have abandoned surgery due to complications. The other procedures used for closure of incompetent perforator veins include subfascial endoscopic perforator surgery (SEPS) as well as minimally invasive ultrasound guided sclerotherapy, thermo-ablation and recently Venaseal by catheter delivery.

Case Details: Mrs. K presented to our clinic with left sided varicose veins predominantly in the antero-lateral aspect of the upper thigh region and medial lower third of the leg. She was C3 on CEAP and on duplex ultrasound examination showed incompetence of her left great saphenous vein (7mm) as well as anterior accessory vein (5mm). There was also an incompetent perforator over her mid-calf region (3mm).

She was initially treated with EVLA of both her left great saphenous vein and her left anterior accessory vein. A few days later, cyanoacrylate was used to close the mid-calf perforator.

This was performed by initially closing off the perforator communication into the deep system, by using tumescence anaesthesia. This was performed to improve safety by preventing a deep vein extension. Venablock (0.15mls) was then injected directly into the perforator via ultrasound guidance longitudinally and slowly withdrawn while injecting. Pressure was then applied for 10 seconds and then placement of cyanoacrylate was then checked by ultrasound.

The patient was then reviewed 2 weeks later to check the placement of cyanoacrylate. Ultrasound guided sclerotherapy was then performed for her distal great saphenous vein as well as for a tributary traversing laterally. She was reviewed again in 1 month for removal of trapped blood and then again in 6 months.

At her 6-month review, closure of the left great saphenous vein, left anterior accessory vein as well as the mid-calf perforator was noted. There were no complications and she had not noted any issues except for some tender lumps that subsided on their own.

Conclusion: Use of cyanoacrylate for the treatment of perforators allowed for a closure rate comparable to using ultrasound guided sclerotherapy (78% at 20 months) on its own. When previously reviewed with Venaseal, this method showed a 76% closure rate. Using a direct injection technique with cyanoacrylate may reduce the risk of recurrence and re-treatment that is often seen in ultrasound guided sclerotherapy.

Chronic Lipodermatosclerosis in a Patient with Functional Venous Disease

Dr Preshy Varghese[1]
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70-year-old man with a BMI of 57.1 presenting with bilateral symptomatic tributary varicose veins and chronic lipodermatosclerosis of both lower limbs. There was no history of DVT or PE. He had central obesity with overhanging anterior abdominal wall. Duplex ultrasound showed no GSV or SSV reflux, no deep venous thrombosis, reflux or obstruction. He has tributary veins reflux which were treated with Ultrasound guided sclerotherapy. His symptoms of pain and edema minimally improved by sclerotherapy. He continued to wear below knee Class 2 (30mm Hg) compression stockings for 4 months. His leg edema has improved with compression stockings. In the absence of obstruction or reflux in the superficial or deep veins in the lower limbs, he was considered to have functional venous disease causing lipodermatosclerosis. Functional venous disease (FVD) can be described as the situation in which symptoms and signs typical of venous hypertension in the absence of overt venous pathology. It includes the syndrome of constitutional functional venous disease (CFVD) in which decreased vein wall tone and stasis microangiopathy are associated with the symptoms (heaviness, tension, and pain) and signs (lower-limb edema, hyperpigmentation, lipodermatosclerosis and venous ulcers) of venous hypertension in the absence of superficial or deep vein refluxes .(1,2)

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Save the Date

Unfortunately we couldn't be together in Sydney in 2021 so we will be hosting the 22nd Annual Scientific Meeting at the Crowne Plaza Coogee from the 20 - 23 May 2022.

More details will become available after this year's virtual conference, but please save the date so we can see you next year.

Warm Regards,

Zivka, Jan, David and Simon

ACP2022 Organising Committee

EXHIBITORS

The ACP would like to thank all of our exhibitors for their continued support. Remember to visit our exhibitors on the virtual conference platform.