

Subject Outline: Elective B – Advanced Procedural Dermatology – Phlebology and Microsclerotherapy



Course: Master of Dermatology (Coursework)

Subject: Elective B: Advanced Procedural Dermatology – Phlebology and Microsclerotherapy.

Credit Points: 4

Year/Semester Delivered: 2/4

Subject Outline:

This subject builds on knowledge and skills already developed in the procedural domain of dermatological surgery. The areas covered in this subject are closely related.

Phlebology involves the diagnosis and treatment of venous and lymphatic disorders, including spider veins, varicose veins, chronic venous insufficiency, venous leg ulcers, congenital venous abnormalities, venous thromboembolism and other disorders of venous and lymphatic origin. In broad terms it includes the prevention, diagnosis, treatment and rehabilitation of patients with venous diseases and venous malformations.

Microsclerotherapy is a specific technique employed to treat some of the conditions listed above, especially spider veins on the legs. It is a relatively straightforward procedure which involves injecting sclerosing agents into the veins using a very thin needle. This causes the vein to become inflamed and shut down. As blood is no longer able to flow through the 'sealed vein', they disappear over time.

This subject is divided into two sections, Phlebology and advanced application of techniques used for treatment of venous issues, namely, Microsclerotherapy

The broad content areas covered are:

Phlebology:

- Venous hypertension and its complications
- Pathophysiology of varicose veins and telangiectasias
- Diagnostic techniques
- CW-Doppler competency
- Principles of duplex ultrasound
- Thrombophilia and hypercoagulable states
- Diseases with telangiectatic manifestations
- Vessel classification
- Indications and contra-indications for sclerotherapy

- Sclerosing agents
- Pharmacokinetics and pharmacodynamics of sclerosing agents
- Sclerotherapy
- Ultrasound guided sclerotherapy
- Endovenous laser ablation
- Medical and ethical aspects of sclerotherapy
- Infection control

Advanced Interventional Techniques -Microsclerotherapy:

- Preparation and visualization
- Injection technique
- Adverse sequelae
- Post injection care

The two component sections of this subject are supported by online modules, each containing a range of activities centred on case studies, readings, research papers and video resources.

Learning Outcomes:

Each of the online modules has its own set of specific learning outcomes. The broad outcomes listed below are aligned with these.

After completing this subject, students will be able to:

1. Diagnose common venous diseases/presentations
2. Apply commonly used diagnostic techniques to diagnose
3. Identify thrombophilia and hypercoagulable states
4. Demonstrate a knowledge of the commonly used sclerosing agents and their application
5. Select appropriate sclerosing agent dosage (sodium tetradecyl sulfate and polidocanol based)
6. Demonstrate a knowledge and understanding of indications, contraindications of ultrasound guided sclerotherapy and endovenous laser ablation
7. Correctly select patients who will benefit from sclerotherapy/microsclerotherapy.
8. Perform simple microsclerotherapy under supervision.
9. Implement compression therapy appropriately
10. Plan and implement mitigation strategies to minimise/prevent complications arising from sclerotherapy.

Student Workload:

The following extract for the ACD Academic Awards Framework Policy should be used as a guide to the minimum time a student should spend working on this subject.

“A 4 credit point subject will have a minimum of 48 hours teaching time associated with it ...” per semester.

“1CP will equate to a minimum of 2.5 hours personal study time per week for the student. Over a semester (20 weeks) this equates to 200 hours of personal study time for a 4 CP subject”.

Teaching:

- Weekly F2F tutorial clinical teaching sessions
- Weekly Virtual classroom sessions (Includes contribution to online case based discussion)
- WpBA (Selected)
- Student self-paced online study.

Assessment:

- Formal MCQ
- Portfolio of treated cases/experience
- Written Assignment/Research report
- WpBA (Selected)
- Virtual classroom contributions

Assessment task	Weight	Subject Learning outcomes assessed	Curriculum Learning Outcomes	Due date
MCQs	20%	4 - 10	BLO 2-5/LO 2-8 BLO 6-8/LO 9-18	TBA
Portfolio: Supervised Cases Completed	30%	1 - 10	BLO 2-5/LO 2-8 BLO 6-8/LO 9-18 BLO 10/LO 22	TBA
Written Assignment 1: Case Analysis	20%	1 – 7, 10	BLO 4/LO7	TBA
Written Assignment 2: Case Reports	20%	1 – 7, 10	BLO 2-5/LO 2-8	TBA
Discussion: Virtual classroom case based discussion contribution	10%	All	All	Assessed Weekly

Competency based:
WpBA*

ProDA: Injection Techniques	C/NC	8	BLO 6-8/LO 9-18 BLO10/LO 22	By arrangement
DermCEX: Sclerotherapy	C/NC	4 - 8	BLO 6-8/LO 9-18 BLO10/LO 22	By arrangement
DermCEX: Compression therapy	C/NC	9	BLO 6-8/LO 9-18 BLO10/LO 22	By Arrangement

Recommended Resources:

Each online tutorial contains:

- Contextualized inbuilt case studies and journal article download links
- Inbuilt video tutorials which should be accessed.
- Procedural clips

Additionally, you are advised to access:

- **Weiss R, Feied C, Weiss M.** *Vein Diagnosis and Treatment: A Comprehensive Approach.* Mc Graw-Hill.
- **Bergan, J.** *The Vein Book.* Academic Press. ISBN: 0123695155.
- **Australian and new Zealand Journal of Phlebology**
- **Goodnight SH, Hathaway WE.** *Disorders of Haemostasis and Thrombosis, A Clinical Guide.* McGraw Hill. Relevant Chapters
- **Australian and New Zealand Standard.** *Guide to the Safe Use of Lasers in Healthcare.* Document AS/NZS 4173:2004.

Curriculum Mapping:

DOMAIN 2: Medical Dermatology (Fundamentals of Clinical Practice)

BLO 2: Critically assess patients, by generating an accurate history and through a systematic and comprehensive clinical examination.

BLO 3: Critically assess and synthesise specialist medical dermatological knowledge of disease process, presentation and epidemiology to develop effective differential diagnoses.

BLO 4: Critically analyse the need for and use of appropriate investigations to develop and justify well-reasoned clinical diagnoses.

BLO 5: Evaluate results of investigations and employ clinicopathologic correlation to then develop and assess effective management plans appropriate to the diagnosis and the patient's context

Learning outcomes

LO 2: Develop a therapeutic relationship with the patient and carers as appropriate.

LO 3: Generate a comprehensive relevant history from the patient and carers, as appropriate.

LO 4: Create an appropriate context for informed consent.

LO 5: Assess a patient's condition through a systematic and comprehensive patient examination.

LO 6: Formulate sound clinical decisions and differential diagnoses through the application of dermatological knowledge and skills to both the assessment of a patient's condition and appropriate diagnostic investigations.

LO 8: Create, implement and evaluate effective treatment management plans, taking into account the patient's condition and context.

DOMAIN 3: Procedural Dermatology (Specialist Procedures)

BLO 6: Critically apply specialist medical knowledge and diagnostic skills to develop best practice treatment options in procedural dermatology

BLO 7: Synthesise anatomical understanding of the skin and underlying soft tissues with technical skills in the performance of dermatological procedures using aseptic technique

BLO 8: Evaluate methods and processes to optimise post-procedural haemostasis and wound healing.

Learning outcomes

LO 9: Evaluate a patient's condition before performing dermatological procedures, including creating context for informed consent from the patient and/or appropriate carer(s), in accordance with current legislation.

LO10: Develop a thorough anatomical understanding of the skin and underlying soft tissues and apply this knowledge base to the performance of dermatological procedures.

LO 11: Evaluate local anaesthetics and analgesics relevant to safe and effective dermatological procedures.

LO 12: Evaluate instruments, materials and equipment to perform dermatological procedures safely and effectively.

LO 13: Generate safe and effective preparations for dermatological procedures using aseptic technique.

LO 14: Develop appropriate technical skills in the performance of safe and effective dermatological procedures.

LO 15: Optimise haemostasis through applied knowledge of the physiological haemostatic process and appropriate pre-operative, intra-operative and post-operative skills and techniques.

LO 16: Evaluate wounds and wound dressings to optimise post-procedural wound healing.

LO 17: Comprehensively design and implement after-care and follow-up post-procedural plans and procedures.

LO 18: Evaluate and design mitigating measures for post-operative complications following dermatological procedures.

DOMAIN 4: Professional Qualities (Quality and Safety)

BLO 10: Design and deliver safe, high quality health care and research according to ethical codes of practice and legal obligations

Learning outcomes

LO 22: Design and deliver quality and safety standards to ensure patients receive safe, high quality care.