

MODULE 6

Lower Limb & Foot

LOWER LIMB & FOOT

15.02.05

Preamble - Objectives and Outcomes

ALSO SEE [OVERALL PREAMBLE](#) (hypertext link on webpage)

At the time of presentation to the final FRACS exam, the candidate should be aware of the aetiology of lower limb lesions, deformities and defects and their management including methods of reconstruction. Areas of particular emphasis are the overall management of degenerative ulceration and the reconstruction of tissue deficits of the lower limb.

Resources

In-hospital training posts will provide the bulk of the exposure to this material. Particular opportunity should be taken to attend combined clinics with orthopaedics and vascular surgery.

Suggested Reading

Books	Achauer, Volumes 1-5		
	Mathes and Nahai, particularly for muscle flaps		
	Cormack and Lamberty, particularly for vascular anatomy and skin flaps		
Journals	PRS	}	
	BJPS	}	appropriate selected articles
	Annals of Plastic Surgery	}	
	Clinics of Plastic Surgery	}	

Delivery of this module

- Literature review
- Clinical experience including in clinics, peri-operative care on the ward and in the operating theatre.
- Meetings - Annual registrars' meeting, RACS Annual Scientific Congress, ASAPS
- Courses - EMST (Part 1 component) and other courses and workshops offered under the auspices of ASAPS, ASAPS or RACS.

Assessment methods used for this module

- Clinical assessment and mentors reports throughout training
- Report from the Regional Supervisor of Surgical Training
- Logbook assessment
- Final Fellowship Examination in Plastic & Reconstructive Surgery including written questions, long and short case clinical examinations, vivas in surgical and applied anatomy and operative surgery and pathology (7 sections)

Coding Used:

A = Aesthetic
C = Congenital and Paediatric
I = Inflammatory and Infection
N = Neoplastic & Tumours
D = Degenerative Conditions
P = Procedures and Techniques
T = Trauma

Levels of knowledge required are as follows:

Revisional Knowledge - Much of the basics in this will have already been covered in Plastic & Reconstructive Surgical Science and Principles Examination. Trainees are required to be able to analyse and apply appropriately the science and principles of the following in clinical environments:

Anatomy:

- vascular axes of the lower limb
- detailed anatomical knowledge underlying local and distant flap dissection
- of groin dissection

Pathology:

- soft tissue and bony tumours of the lower limb, clinical behaviour
- wound healing – pathophysiology of chronic wounds
- circulation – pathology of the macro and microcirculation

Core Knowledge - A detailed knowledge in these areas will be expected. All trainees are required to be able to diagnose, plan, perform effectively and manage:

Trauma:

- skin loss
- nerve injuries
- tendon injuries
- the multidisciplinary management of the severely injured lower limb
- amputation at all levels of the lower limb (adult and paediatric) and manage rehabilitation
- stump problems –soft tissue instability, pain or breakdown
- management and coverage of traumatic soft tissue defects of the lower limb, recognising regional considerations especially knee, leg, ankle and foot
- multidisciplinary management and reconstruction of bony defects

Degenerative conditions / ulceration:

- pressure sores – aetiology, prevention, assessment, non-operative and operative management; with /without spinal cord injury; osteomyelitis: including sacral, ischial, trochanteric and heel ulceration
- leg ulceration – all aetiologies (venous, arterial, medical); assessment for operative and non-operative management
- multidisciplinary management of diabetic and other neuropathic foot problems

Other:

- of the lower limb – x-ray, bone scan, lymphoscintigraphy, CT, MRI, MRA, angiography, Doppler ultrasound
- investigations of circulation of the lower limb
- local anaesthetic techniques – regional blocks including femoral and ankle blocks
- lymph node surgery – sentinel node biopsy, groin lymphadenectomy
- regional reconstructive options – hip, sacral, ischial, groin, thigh, knee, leg, ankle, foot, heel, sole
 - non-operative, local, regional, distant flap options
 - advantages and disadvantages of each option
- Advantages , disadvantages , indications and techniques of utilisation for flaps of the lower limb including: gluteal, posterior thigh, vastus lateralis, gracilis, TFL, anterolateral thigh, lateral thigh, medial thigh, saphenous, sural (including reversed), gastrocnemius, soleus, fibular, peroneal, anterior tibial, posterior tibial, lateral supramalleolar, lateral calcaneal, FHL, dorsalis pedis, EDB, medial plantar, abductor hallucis.
- exposed implants/prostheses
- hyperbaric oxygen therapy – indications and technique
- infections of the lower limb – osteomyelitis (acute and chronic) and necrotizing fasciitis
- benign soft tissue tumours
- lymphoedema (adult)
- lymphoedema (paediatric)
- vascular malformations (adult and paediatric)
- syndactyly
- aesthetic surgery of the lower limb – body contouring including thigh lifts and implants
- all aspects of skin cancer – especially of the leg and foot

Outline Knowledge - In this area the principles are required, but not a detailed knowledge such that the candidate would be in a position to manage the condition alone. Therefore, trainees are expected to be able to discuss the outline of management of:

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| ▪ malignant soft tissue and benign and malignant bony tumours and multidisciplinary sarcoma management | N |
| ▪ congenital pseudarthrosis | C |
| ▪ technique of total contact casting | P |
| ▪ techniques of external skeletal fixation and bone lengthening | P |
| ▪ replantation and transplantation | T |
| ▪ levels of function of prostheses and orthoses of the lower limb | P |