

HAND SURGERY POST-FELLOWSHIP EDUCATION AND TRAINING (PFET) PROGRAMME

TABLE OF CONTENTS

SECTION 1: Objective of Hand Surgery PFET Programme

- 1.1 Aims of the Programme
- 1.2 Learning Outcomes

SECTION 2: Curriculum

- 2.1 Injury of the Hand and Upper Limb
- 2.2 Elective Surgery of the Hand and Upper Limb

SECTION 3: Training Programme Duration and Structure

- 3.1 Duration
- 3.2 Structure

SECTION 4: Administration of Programme

- 4.1 Administrative Structure
- 4.2 Selection and Accreditation of Training Centres
- 4.3 Selection of Trainees
- 4.4 Assessment of Trainees

SECTION 5: Fee Structure

- 5.1 Trainee Hand Surgery PFET Programme Application Fee
- 5.2 Training Programme Fee
- 5.3 Training Centre/Position - Assessment and Review Fee
- 5.4 Trainee Exit Assessment Fee

APPENDIX 1 – Accumulation of credit points

APPENDIX 2 - Units to cover curriculum

SECTION 1: Objective of Hand Surgery PFET Programme

The PFET Programme in Hand Surgery will be conducted within the framework of the nine College competencies.

1.1 Aims of the Programme

The programme aims to:

- a. Equip the surgeon with the specialist knowledge and range of skills necessary for practice of hand surgery at the level of the newly appointed Consultant Hand Surgeon
- b. Link and integrate the acquisition of detailed specialist knowledge with practical, technical and professional skills in a way that enhances the care of patients presenting with disorders of the hand
- c. Encourage detailed exploration of the evidence-base for hand surgery practice thus promoting a culture of innovation and scientific enquiry
- d. Provide a model for ongoing integrated learning with appropriate internal and external assessments; elements of which could subsequently be adapted for use in consultant revalidation by the RACS
- e. Define the standard for the practising hand surgeon within Australia allowing the profession to define its own paradigm of specialist education
- f. Promote recognition of Hand Surgery as a postgraduate sub-specialty
- g. Improve the standard of care for disorders of the hand in Australia

1.2 Learning Outcomes

1.2.1 Knowledge

Trainees will be able to:

- a. Demonstrate a comprehensive working knowledge of the *principles* of the theoretical and practical basis of hand surgery to include the relevant basic sciences
- b. Demonstrate a more detailed knowledge of specific areas of hand surgical practice constituting the more common conditions; as designated in the curriculum
- c. Develop an awareness of the clinical and scientific literature and evidence-base for the practice of hand surgery
- d. Be aware of general advances within the field of primary training (orthopaedic and/or plastic surgery).

1.2.2 Cognitive Skills

Trainees will be able to:

- a. Demonstrate the ability to elicit and synthesise relevant information and plan a patient care pathway
- b. Critically evaluate scientific and clinical literature pertinent to the practice of hand surgery
- c. Demonstrate capacity for higher order thinking and decision making
- d. Access literature databases and online journal facilities
- e. Be capable of designing an audit project
- f. Be capable of designing a research project and writing relevant reports and papers

1.2.3 Practical Skills

Trainees will be able to:

- a. Acquire competencies relevant to the discipline comprising the planning, counselling, and undertaking of procedures and including managing aftercare and potential complications
- b. Acquire a range of operative skills appropriate to those expected of the newly-appointed consultant

1.2.4 Personal Qualities

Trainees will be able to:

- a. Effectively communicate matters pertaining to everyday professional practice - with patients, colleagues and to larger audiences as appropriate
- b. Demonstrate the ability to work with, organise and lead the team
- c. Function as a competent physician practising according to Good Clinical Practice guidelines in compliance with the appropriate regulatory bodies.

SECTION 2: Curriculum

2.1 Injury of the Hand and Upper Limb

History and Clinical Examination of the Upper Limb

Skin

Techniques of skin cover – management of skin loss including basic plastic surgical techniques.

- a. Split skin grafts
- b. Full thickness grafts
- c. Local and distant pedicle flaps; Z-plasty; skin advancement and rotation
- d. Free flaps – skin, subcutaneous tissue, multi-tissue

Tendon

1. Flexor Tendon
 - a. Anatomy, physiology, biomechanics, healing
 - b. Techniques of primary repair
 - c. Secondary techniques eg graft, pulley reconstruction, tenolysis, tenodesis
2. Extensor Tendon
 - a. Anatomy, physiology, biomechanics, healing
 - b. Techniques of primary repair
 - c. Secondary techniques eg graft, transfers, tenolysis

Nerve

- a. Anatomy, physiology, types of injury
- b. Repair mechanisms
- c. Repair techniques, microsurgical techniques
- d. Primary repair – major nerve, digital nerve
- e. Nerve graft
- f. Neurolysis
- g. Neuroma management
- h. Brachial plexus injuries

Vessels

- a. Anatomy, physiology, pathology
- b. Microsurgical techniques, vessel repair and anastomosis
- c. Management of arterial injuries
- d. Management of compartment syndromes and sequelae
- e. Management of ischaemic hands

Bone

1. Anatomy, physiology, fracture healing, biomechanics of fracture repair and fixation
2. Techniques of fracture fixation – closed methods
 - a. Use of splints and casts
 - b. External fixation
3. Techniques of fracture fixation – open methods eg K-wires, plates and screws
4. Management of metacarpal and phalangeal fractures and fracture dislocations
 - a. Shaft
 - b. Intra-articular
5. Wrist injuries
 - a. Carpal bone fracture (non-scaphoid)
 - b. Scaphoid fractures
 - c. Carpal dislocations and fracture dislocations

- d. Fractures and fracture dislocations of the distal radius
- e. Fractures, dislocations and fracture dislocations of the distal ulna
- 6. Kienböck's disease and other carpal ischaemias
- 7. Secondary management
 - a. Repair of non-unions and malunions
 - b. Osteotomies, arthroplasties and fusions
 - c. Management of late carpal collapse
 - d. Management of late problems in the distal radioulnar joint
 - e. Management of late problems in the carpometacarpal joint areas
 - f. Management of bone loss (bone grafts, vascularised bone grafts, free flaps)

Ligaments

- 1. Anatomy, physiology, biomechanics, types of injury
- 2. Diagnostic techniques: standard imaging, special imaging, arthrography, arthroscopy
- 3. Management of dislocations and ligament injuries – interphalangeal, metacarpophalangeal
 - a. Open repair of ligament injuries, fingers and thumb
 - b. Reconstruction of chronic ligament injuries
- 4. Management of acute and chronic ligament injuries of the wrist
 - a. Carpal subluxations and instabilities
 - b. Management of injuries to the distal radioulnar joint and triangular fibro-cartilage complex
 - c. Arthroscopic surgery of the wrist and hand

Amputations

- 1. Techniques of treatment of fingertip injuries
- 2. Techniques of repair of thumb amputations
- 3. Management of finger, hand and forearm amputations
- 4. Replantation and revascularisation
- 5. Reconstruction following amputation
 - a. Prostheses and orthoses
 - b. Thumb and digit reconstruction

Special Injuries

- 1. Management of thermal and electrical injuries
- 2. Management of pressure and injection injuries
- 3. Management of degloving injuries
- 4. Management of multiple tissue injuries
- 5. Radiation and chemical injuries
- 6. Vibration injuries

2.2 Elective Surgery of the Hand and Upper Limb

Congenital

1. Embryology of the hand and upper limb
2. Classification of congenital hand anomalies
3. Management of congenital hand anomalies
 - a. thumb eg aplasia, duplication
 - b. digits eg syndactyly, polydactyly, clinodactyly, camptodactyly
 - c. limb eg radial and ulnar club hand, aplasia, cleft hand
4. Techniques used in management of congenital anomalies
 - a. pollicisation, finger transfer
 - b. flaps
 - c. toe to hand transfers
 - d. microsurgical techniques
 - e. physis manipulation
 - f. external fixator manipulation

Paralyses

1. General principles of management of cerebral palsy and other spastic paralyses
2. General principles of management of tetraplegia
3. Paralyses due to poliomyelitis
4. Paralyses due to nerve injury and reconstruction for peripheral nerve lesions
5. General principles of management of muscular dystrophy and other neurological conditions
6. Tendon transfers
7. Nerve transfers
8. Stabilisation of joints
9. Contracture management

Arthritis

1. Pathophysiology of osteoarthritis and rheumatoid arthritis and other inflammatory joint disease
2. General principles of management of arthritis in hand and upper limb
3. Management of rheumatoid arthritis including tendon and joint synovectomy, tendon transfer, arthroplasty and arthrodesis
 - a. Interphalangeal joints
 - b. Metacarpophalangeal joints
 - c. Carpometacarpal joint of thumb
 - d. Wrist and inferior radioulnar joint
4. Management of osteoarthritis including arthroplasty and arthrodesis
 - a. Digital joints
 - b. Thumb base
 - c. Intercarpal joints
 - d. Wrist and inferior radioulnar joint
5. Management of other arthritides
 - a. Psoriatic arthropathy
 - b. Systemic lupus
 - c. Scleroderma
 - d. Juvenile RA
 - e. Gout
 - f. Others

Nerve Compression Syndromes

1. Pathology, EMG techniques, nerve conduction studies
2. Management of compression syndromes
 - a. Median
 - b. Ulnar
 - c. Radial
 - d. Thoracic outlet and other proximal compartment syndromes

Tumours

1. Pathology of tumours affecting the hand
2. Principles of tumour management
3. Management of soft tissue tumours
 - a. Ganglion
 - b. Benign soft tissue tumours including pigmented villonodular synovitis
 - c. Malignant soft tissue tumours
4. Management of bone tumours
 - a. Benign
 - b. Malignant
 - c. Metastatic

Infection

1. General principles, prevention, use of antibiotics
2. Wound infection
3. Nail infection
4. Infection of skin and subcutaneous tissues
5. Deep sepsis
 - a. Septic arthritis
 - b. Osteomyelitis
 - c. Tendon sheath infection
6. Esoteric infections eg orf, mycobacterial infections
7. Limb and/or life threatening conditions eg necrotising fasciitis etc.

Connective Tissue Disorders

1. Anatomy, physiology, pathology of connective tissue disorders in the hand, stenosing syndromes eg trigger digits, de Quervain's syndrome
2. Dupuytren's contracture
 - a. Anatomy, physiology, pathology, epidemiology
 - b. Surgical techniques
3. Tenosynovitis of the wrist and hand
4. Other connective tissue disorders eg fasciitis, enthesitis

Pain Syndromes in the Upper Limb

1. Occipito-cervico-brachial pain
2. Occupational and vocational problems
3. Pain dysfunction syndromes eg "cumulative trauma disorder" and "repetitive strain injury"
4. Causalgia and other types of dystrophic responses – complex regional pain syndromes (1 and 2)
5. Hysterical and psychosomatic conditions in the upper limb

Sports Injuries in the Upper Limb

Related Disciplines

1. Dermatology
 - a. Disease and tumours of the skin as they affect the hand
 - b. Abnormalities of the nail
2. Neurology
 - a. Detailed anatomy and physiology of the peripheral nervous system in the upper limb
 - b. Knowledge of neurological conditions which cause sensory deficit and paralysis in the upper limb
 - c. Basic knowledge in use and interpretation of electrical studies of nerves
3. Rheumatology
 - a. Knowledge of connective tissue disorders which may manifest themselves in the upper limb eg scleroderma, lupus, psoriasis, gout etc.
 - b. Knowledge of basic principles of management of rheumatoid arthritis
4. General medicine – a knowledge of the way in which systemic disease may manifest itself by changes in the hand – finger clubbing, acrocyanosis, diabetic cheirarthropathy
5. Rehabilitation – an extensive knowledge of the techniques and principles of rehabilitation, physiotherapy and occupational therapy in the upper limb
6. Radiology - an extensive knowledge of the various types of medical imaging which may be of value in the investigation of problems in the hand and wrist eg ultrasound, CT, MRI, contrast arthrography
7. Psychiatry – understanding of the interplay of psyche and soma in injury and disease of the upper limb eg hysterical hand conditions, pain magnification, malingering etc.
8. Vascular disease – an understanding of the effects of circulatory disorders on the upper limb
9. Oncology – general knowledge of tumour behaviour, classification and management
10. Anaesthetics – an understanding of anaesthetic techniques, particularly regional anaesthesia

SECTION 3: Training Programme Duration and Structure

3.1 Duration

- a. Full-time – minimum of 18 months in approved training centres post-speciality Fellowship training.
- b. Part-time – appropriate programme training over a maximum period of four years following speciality training.

3.2 Structure

3.2.1 Criteria Necessary for Completion of Programme

Completion of the programme is achieved following the achievement of 100 credit points over the duration of the programme (Appendix 1). These are gained as follows:

- a. The curriculum is to be covered in six units, each unit attracting ten credit points. (Appendix 2)
- b. Credit points for each unit are accumulated from:
 - i. Department lectures/presentations/tutorials
 - ii. Attendance at outpatient clinics
 - iii. Surgical log book
 - iv. Private study
 - v. Research project
 - vi. Clinical supervisor assessment
- c. Compulsory training courses in microsurgery and appropriate fracture fixation attract ten credit points each. Assessment of training and experience in microsurgical techniques and fracture fixation techniques may replace a formal course and satisfy the award of ten credit points. (Those training in the Orthopaedic speciality may need to undertake a formal microsurgical training course; those training in the Plastic Surgery speciality may need to undertake a formal fracture fixation course.)
- d. Attendance at national/international congresses – a minimum of two – attracting five points each. The trainee should attend the ASM of the AHSS during the training period.
- e. Pass an exit assessment process at the completion of *a*, *b*, *c* and *d* above - attracting ten credit points for the successful candidate. The attainment of these ten credit points is an obligatory component of the programme structure. The nature of the exit assessment will be determined by the Hand Surgery PFET Committee in conjunction with advice from the senior specialities and the College. However, this formal assessment will take the form of an interview before the Hand Surgery PFET Committee/Sub-Committee over a four hour period.

3.2.2 Accumulation of credit points during Speciality FRACS training

- a. Recognition of hand surgery training within speciality training programmes, with the ability to compile a maximum of 30 credit points during speciality surgical training.
- b. Part or full completion of a number of units to accumulate credit points during speciality training – determined by assessment of the pre-Fellowship training.
- c. Within practicality of the specialist training programme, assistance provided in appointment to Hand Surgery training positions during the final two years of the speciality training programme for those enrolling in the Hand Surgery training programme. This may only occur with the imprimatur of the relevant senior specialities and the College.

NB: Recognition of hand surgery training within the speciality training programme as a component of PFET Hand Surgery training would require agreement amongst the College, the two senior specialities, and the Hand Surgery PFET Committee.

SECTION 4: Administration of Programme

4.1 Administrative Structure

- a. Hand Surgery PFET Committee (5 members):
 - i. Chairman of Australian Hand Surgery Society (AHSS) Education Committee
 - ii. Two AHSS members, one of whom will usually be the President of the AHSS
 - iii. Representative appointed by the Orthopaedic Surgery speciality programme
 - iv. Representative appointed by the Plastic Surgery speciality programme
- b. Sub-Committees of the Hand Surgery PFET Committee: responsible for –
 - i. Training centre and supervisor selection/accreditation
 - ii. Trainee selection and assessment
 - iii. Continuing Education in Hand Surgery
 - iv. Appeals and Complaints relating to the Hand Surgery PFET Programme. (This sub-committee would function in a manner consistent with the methods of the appeals process of the College.)
 - v. Finance

4.2 Selection and Accreditation of Training Centres

4.2.1 Selection of Training Centres

The Hand Surgery PFET Committee will receive applications from Training Centres with the capacity to provide appropriate training according to the following criteria. The Committee will collaborate closely with the Training Boards of Orthopaedic and Plastic Surgery:

- a. The institution(s) in which the position is located must have a defined unit including a designated supervisor, with the capacity to satisfy the demands of the curriculum and the objectives of the PFET Programme.
- b. The centre must provide hand surgery training focused on specialist skills, knowledge and experience beyond that delivered in the SET Programmes in Orthopaedic Surgery and Plastic Surgery.
- c. Positions in institutions with current SET Programmes in Orthopaedic Surgery and Plastic Surgery accredited training positions must demonstrate that the PFET position will not impact on the training, education and operative experience of the SET Programme trainees. This oversight will be provided by the current process of assessment of SET positions and by the Hand Surgery PFET Committee assessment of PFET positions.
- d. The position must have appropriate remuneration in place for the fellow.

The training centre must provide the following facilities and resources:

- a. Computer facilities with IT support

- b. Tutorial room
- c. Access to private study area
- d. General educational activities within the hospital
- e. Coordinated schedule of learning experiences for each trainee
- f. Access to simulated learning environment
- g. Access to external educational activities for trainees
- h. Opportunities for research, inquiry and scholarly activity

The trainee must have access to a range and volume of clinical and operative experience which will enable him/her to acquire the competencies required to be a hand surgeon:

- a. Supervised consultative ambulatory clinics in consultative practice – a minimum of two weekly
- b. Beds available for relevant specialty
- c. Consultant led ward rounds with educational as well as clinical goals
- d. Adequate caseload and casemix
- e. Operative experience for trainees – minimum of three operating lists per week

The centre or centres must have the facilities, equipment and clinical support services required to manage surgical cases in hand surgery:

- a. Facilities and equipment available to carry out diagnostic and therapeutic surgical procedures
- b. Imaging – diagnostic and intervention services
- c. Diagnostic laboratory services
- d. Theatre equipment
- e. Support/ancillary services – administrative, nursing, hand therapy

The centre or centres involved in surgical training must be fully accredited and have the governance structure to deliver and monitor safe surgical practices in the following categories:

- a. Hospital accreditation
- b. Risk management processes with patient safety and quality committee reporting to Quality Assurance Board
- c. Head of Surgical Department and governance role
- d. Hospital Credentialing or Privileging Committee
- e. Surgical audit and peer review programme
- f. Hospital systems review

- g. Experience available to trainees in root cause analysis
- h. Occupational safety

Overseas training centres may be considered for accreditation for 6-12 months provided that these positions and centres satisfy the necessary criteria.

4.2.2 Designated Supervisor of Training

- a. For Australian positions, there must be a dedicated supervisor holding an FRACS in Orthopaedic Surgery or Plastic Surgery and membership of the Australian Hand Surgery Society (AHSS).
- b. For positions outside Australia the dedicated supervisor must have the equivalent professional qualification and association membership in the country where the position is located.
- c. The dedicated supervisor must spend a minimum of 10 hours per week in the institutions including after hours operating but not on-call hours.
- d. The dedicated supervisor must take responsibility for the educational program and supervision of the fellow and agree to comply with the PFET Program Regulations.
- e. The dedicated supervisor must have sufficient post fellowship expertise in the subspecialty area, as assessed by the Hand Surgery PEFT Committee/Sub-Committee which will consider previous training and current practice of the proposed supervisor.
- f. In addition to the supervisor, for each PFET position there must be a minimum of two other orthopaedic or plastic hand surgeons with sufficient post fellowship expertise in hand surgery, as assessed by the Hand Surgery PEFT Committee/Sub-Committee which will consider previous training and current practice of these surgeons.
- g. Each member of the specialist staff must demonstrate a strong interest in the education of the fellow, possess sound clinical and teaching abilities, support the goals and objectives of the PFET Program, and participate in the education, training, supervision and assessment of the fellow.

4.2.3 Accreditation of Training Centres

Following application, accreditation will be provided for three to five years, subject to an initial assessment and a yearly review by the Hand Surgery PFET Committee or its representative(s) to determine that the criteria of 4.2.1 and 4.2.2 are satisfied. Collaboration with the Training Boards of Orthopaedic and Plastic Surgery is vital to the function of the Hand Surgery PFET Committee.

4.2.4 Availability of Training Centres Positions

- a. Funded Hand Surgery PFET positions are currently available in a number of centres. Further positions will be recognised following their establishment,

assessment and accreditation. For further details, refer to the PFET documents on the AHSS website.

- b. These positions are separate from the RACS SET positions in Orthopaedic Surgery, Plastic Surgery and General Surgery.
- c. RACS SET positions will continue in the current number and format and will be subject to the assessment processes currently in place. The addition of post fellowship training positions will add to the training, experience and supervision of pre-fellowship SET trainees.

4.3 Selection of Trainees

4.3.1 Eligibility

The applicant must:

- a. have satisfactorily completed the FRACS Examination in Orthopaedic Surgery or Plastic Surgery; or
- b. have completed the FRACS Examination in a related discipline and have the requisite base experience and scope of practice; or
- c. have completed the Australian Medical Council (AMC) specialist assessment process resulting in formal recognition as a specialist orthopaedic surgeon or plastic surgeon; and
- d. be an Australian citizen or have an appropriate visa to work in Australia as a specialist orthopaedic surgeon or plastic surgeon in a supervised fellowship position; and
- e. have satisfactorily obtained employment in a position accredited for a PFET Programme; and
- f. have current and valid medical registration necessary to practise in the position accredited for the PFET Programme.

4.3.2 Application

Eligible Fellows must apply directly to the AHSS. This application will be assessed by the Hand Surgery PFET Committee/Sub-Committee. A list of accredited positions will be found on the AHSS website (www.ahssociety.org.au).

4.4 Assessment of Trainees

The aim of the assessment process is to confirm that the objectives of the Hand Surgery PFET Programme are met (Section 1); that the curriculum has been covered (Section 2); and the criteria necessary for the completion of the programme are satisfied (Section 3.2.1).

4.4.1 Learning and Teaching Processes

- a. Tutorials and lectures – department based

- b. Supervised outpatient care, assessment and discussion
- c. Supervised operative experience
- d. Attendance at speciality clinics e.g. congenital, tetraplegia, rheumatoid, cerebral palsy
- e. Study of demonstration DVDs of operative procedures
- f. Participation in local, regional and national scientific meetings
- g. Participation in national courses – practical skills-based, instructional lecture-based
- h. Preparation of a research project for publication submission

4.4.2 Assessment Processes

- a. Workplace assessments
 - i. Knowledge based assessment
 - ii. Case based discussion
 - iii. Clinical evaluation exercises
 - iv. Develop algorithms for complex management problems
 - v. Direct observation of operating procedures
- b. Preparation of lectures on designated topics
- c. Exit assessment at completion of programme

4.4.3 Three-monthly supervisor interview

- a. Review outpatient clinic and tutorial attendance and performance
- b. Log book assessment
- c. Assessment of patient load – clinic and operating
- d. Assessment of research project progress
- e. Assessment of curriculum unit progress

4.4.4 Exit assessment

- a. Assessment of attainment of the criteria necessary for completion of the programme (refer to 3.2.1).
- b. Formal interview of the PFET trainee by the Hand Surgery PFET Committee/ Sub-Committee

4.4.5 Trainee assessment of Training Centre and Hand Surgery PFET Programme

This must be completed and forwarded to the Hand Surgery PFET Committee prior to completion of the programme.

4.4.6 Review of Satisfactory Completion of Trainee Programme

Attainment of 100 credit points

4.4.7 Award of Certificate of Added Qualification in Hand Surgery

SECTION 5: Fee structure

5.1 Trainee Hand Surgery PFET Programme Application Fee

Responsibility of the trainee.

5.2 Training Programme Fee

Responsibility of the trainee.

5.3 Training Centre/Position - Assessment and Review Fee

According to costs generated by the process.

Responsibility of the Australian Hand Surgery Society

5.4 Trainee Exit Assessment Fee

Responsibility of the trainee.

All funds are payable to the Australian Hand Surgery Society. The AHSS will be responsible for funds raised by the RACS for PFET Programme assessment and administration fees.

Appendix 1 – Accumulation of credit points

a. Completion of six curriculum units	60
b. Microsurgery course	10
c. Fracture fixation course	10
d. Attendance at two national/international congresses	10
e. Success at exit assessment	10
	100

Appendix 2 - Units to cover curriculum

I Injury

Unit 1: Fractures, dislocations and carpal instability

- A. Fractures and dislocations
 - Phalangeal
 - Metacarpal
 - Carpal
 - Distal radius
- B. Carpal Instabilities

Unit 2: Nerve and tendon injury

- A. Nerve injury
 - Peripheral nerve
 - Adult brachial plexus
 - Neonatal brachial plexus
- B. Tendon injury
 - Flexor tendon
 - Extensor tendon

Unit 3: Soft tissue cover and vessel injury

- Wound healing
- Skin grafts
- Local, regional, distant flaps
- Free flaps
- Replantation and revascularisation
- Compartment syndrome/ischaemic contracture

II Disease

Unit 4: Nerve compression and tendon transfers

- A. Nerve compression syndromes
- B. Tendon transfers
 - Nerve injury/compression
 - Cerebral palsy
 - Quadriplegia

Unit 5: Arthritis

- A. Rheumatoid arthritis
- B. Degenerative arthritis

Unit 6: General hand conditions

- A. Common hand conditions
 - Tumours
 - Dupuytren's disease
 - Infection
 - Connective tissue disorders
 - Pain management
- B. Congenital anomalies