

關節炎的足部問題與治療

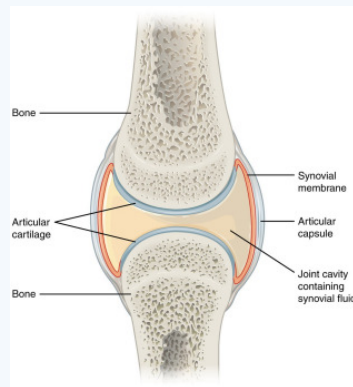
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Introduction

- Foot and ankle are subject to arthritides
 - Rheumatoid arthritis (類風濕型關節炎)
 - Seronegative arthritides
 - Psoriatic arthropathy (牛皮癬型關節炎)
 - Ankylosing spondylitis (強直性脊椎炎)
 - Connective tissue diseases
 - Systemic lupus erythematosus (SLE, 紅斑狼瘡)
 - Mixed connective tissue disorder
 - Crystal Deposition Disease
 - Gout (痛風)
 - Pseudogout (假痛風)

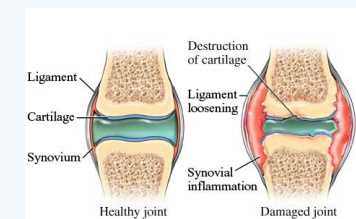
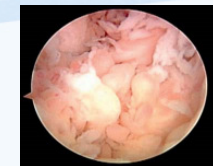
Pathophysiology

- Synovium (滑膜)
 - Thin lining within joints
 - Functions
 - Provide nutrients for articular cartilage
 - Produce lubricants for joint lubrication



Pathophysiology

- Immune mediated inflammatory disease
 - Synovitis (滑膜炎), hypertrophy (增生) of synovium
 - Erosion of articular cartilage and bone, surrounding ligaments and tendons
- Pain
- Deformities (變形)
- Altered lower limb biomechanics



Diagnosis

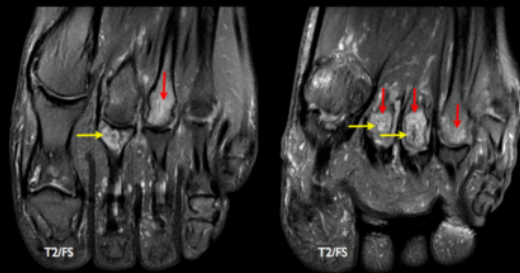
- Early disease may be difficult to diagnose
 - Discomfort
 - Non-specific foot swelling
 - Tenderness on palpation
- Blood tests
- Imaging
 - X-ray
 - MRI



Imaging

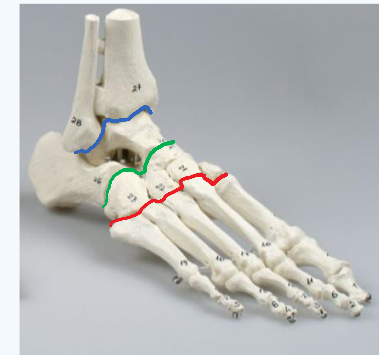


MRI

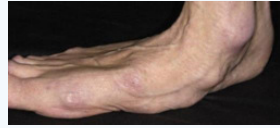
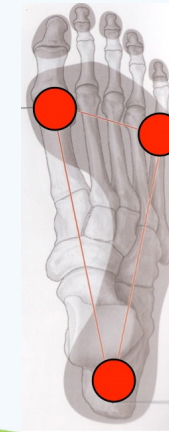


Diagnosis

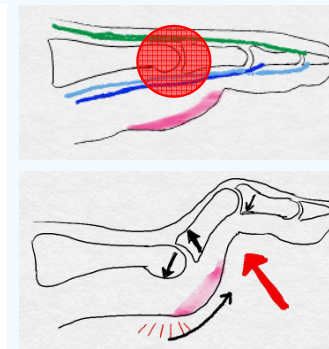
- More advanced disease presents with deformities + pain
 - Forefoot 前腳掌
 - Midfoot 中腳掌
 - Hindfoot 後腳掌
 - Ankle 足踝



Forefoot

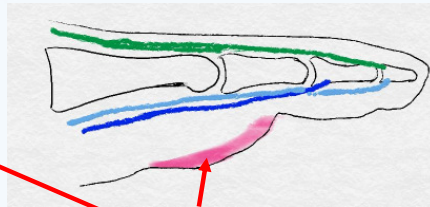


Forefoot Deformity (前掌變形)

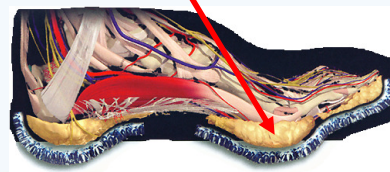


- Distal migration of plantar fat pad
- Dorsal subluxation or dislocation of MTPJ

Forefoot deformity (前掌變形)



Fat Pad



Function as cushion for shock absorption

Forefoot deformity (前掌變形)

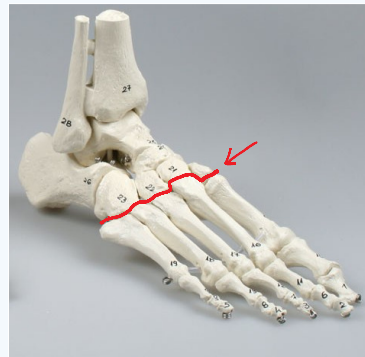


Forefoot deformity (Hallux Valgus) 拇趾外翻



Midfoot arthritis

- Chronic cases
- Tarsometatarsal joint
- Collapse of foot arch (flat foot 扁平足)

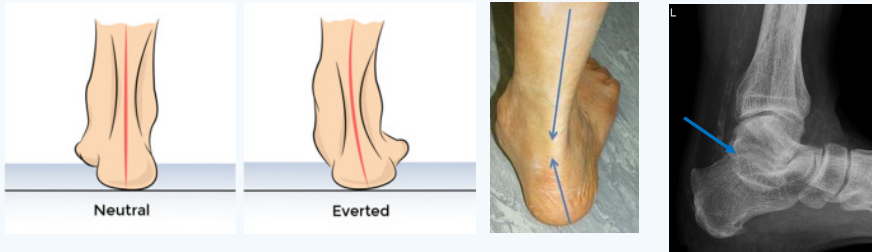
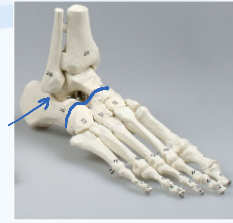


Midfoot arthritis



Hindfoot arthritis

- Occurs in later stage of disease
- Valgus deformity of subtalar joint



Problem Arising...

- Pain 痛
- Callosities 硬皮
- Shoe wear problem 穿鞋問題

Management

- Goals
 - Pain relief 止痛
 - Prevention of deformity 預防變形
 - Correction of deformity 矯正
 - Preservation of function 保留功能
 - Restoration of function 恢復功能
- Non-surgical 非手術治療
- Surgical 手術

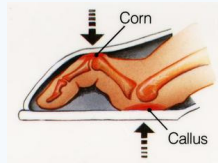
Non-surgical Treatment (非手術治療)

- Medical therapy
- Acute Flare up (急性發作)
 - Non-steroidal Anti-inflammatory medication 非類固醇類消炎藥物
 - Rest /Activity restriction 休息
 - Cast Immobilization 石膏
 - Intra-articular steroid 關節注射
 - Physiotherapy 物理治療
 - Maintain joint motion

Non-surgical Treatment (非手術治療)

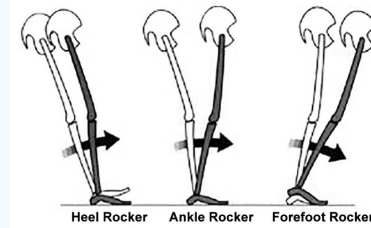
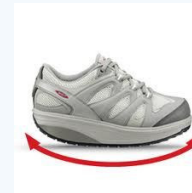
• Proper foot wear 合適的鞋

- Wide toe box 寬鞋頭
- Extra-depth toe box 額外深度的鞋
- Soft upper 柔軟的鞋面
 - Accommodate bunion and hammer toes
 - Prevent pressure points



Non-surgical Treatment (非手術治療)

- Rocker button shoes 弧形鞋底
 - Reduces stress to forefoot/ ankle



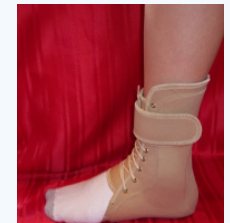
Non-surgical Treatment (非手術治療)

- Insoles 鞋墊
- Metatarsal pads
- Arch support
- Hammer toe splint



Non-surgical Treatment (非手術治療)

- Ankle Foot Orthosis (AFO) 踝足矯形器
- Ankle brace 護踝
- Ankle / subtalar joint arthritis

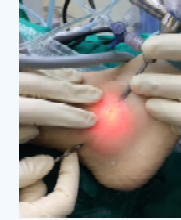
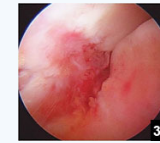


Surgical Treatment (手術治療)

- Individualized
- Proximal joint surgery should precede distal joint surgery
- Staged operation may be necessary
- Interspersed with periods of conservative treatment
- Simultaneous bilateral surgery not advised

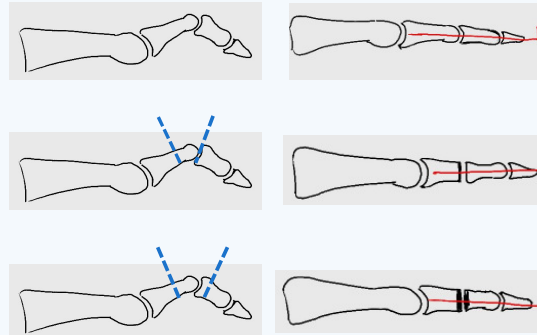
Synovectomy 滑膜切除

- Symptomatic early disease
- Arrest degenerative process
- Contraindicated with joint subluxation and dislocation (limited benefit)
- Arthroscopic 關節鏡
- open



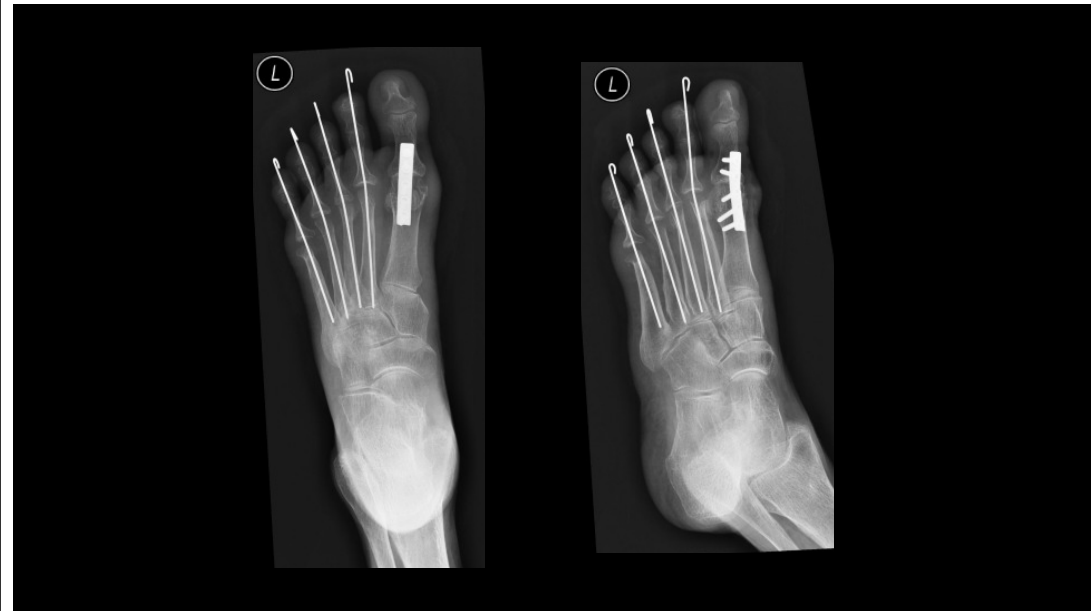
Hammer toe correction 錘狀趾矯正

- Mild deformity
 - Closed osteoclasia + K-wire fixation
- Severe deformity
 - Proximal phalangeal condylectomy (excisional arthroplasty) 關節切除成形術
 - Proximal interphalangeal joint (PIPJ) fusion 關節融合術



Forefoot Reconstruction

- For advanced cases
 - Hallux valgus + multiple fixed hammer toes, metatarsalgia
 - Arthrodesis of 1st MTP joint
 - Excision of lesser toes metatarsal heads
 - Stable 1st MTPJ essential to prevent recurrent lesser toe deformities







Subtalar Fusion

- Open
- Arthroscopic



What to expect from surgical treatment?

- Good pain relief
- Better shoe wear
- Better ambulation
- Some stiffness of joints is expected