

Recurrent infectious arthritis of knee joint associated with Brodie abscess in the proximal tibia



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Introduction

- Brodie abscess is a localized form of subacute osteomyelitis
- Usual clinical manifestation
 - Affected sites: metaphysis before physal closure & metaphyseal
 - Sign and Symptom
 - Systemic symptom and sign are minimal
 - Intermittent pain of long duration w local tenderness over affected area
- Diagnosis
 - Radiographic evaluation
 - Plain radiography and MRI
 - Open biopsy & culture
 - Purulent material, granulation tissue w or w/o cultured organism
 - S. aureus in 50% of pt. & negative in 20%
- Infectious arthritis associated Brodie abscess
 - No report
 - No cure before precise diagnosis and treatment
 - Detection is hard before localized formation
- Clinical importance
 - In relapsed low grade infection in joint after conservative treatment
 - In recurred infection in joint after primary operative treatment

Introduction

- Brief History
 - F/68
 - housewife
 - No trauma history
 - Insidious pain & recently aggravated pain in knee joint
- Laboratory findings
 - ESR: 55/ CRP: 4.08
 - Joint Fluid analysis
 - WBC 10,670, Poly 54%
 - Protein 4.66(NL: 1.00~3.00)
 - Glucose 15.00
 - G(-) & no growth of microorganism

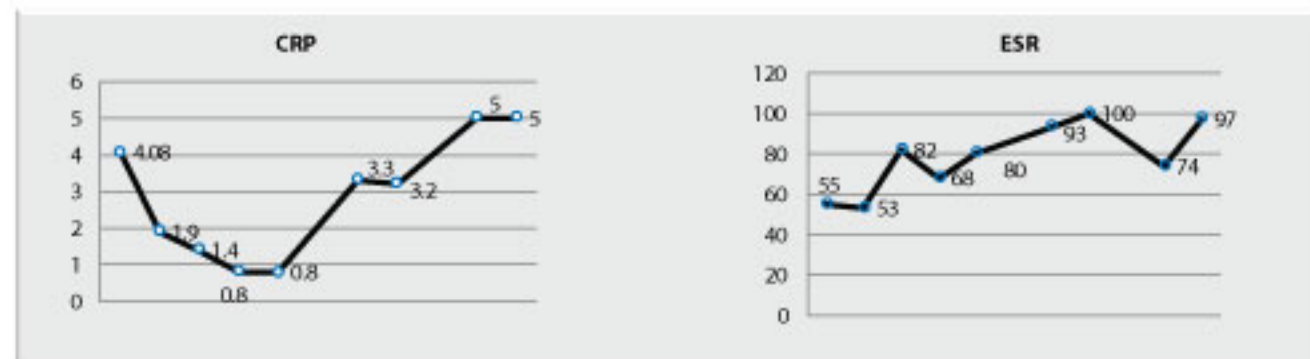


Fig. 2 preoperative radiographic findings

Degenerative tear in medial meniscus, degenerative change in medial compartment and patellofemoral joint

Arthroscopic synovectomy and partial medial meniscectomy

Relapse of Symptom postoperatively 6 months Mild heating sense after exercise Persistent pain in ADL



Conservative treatment (antibiotics)
No improvement

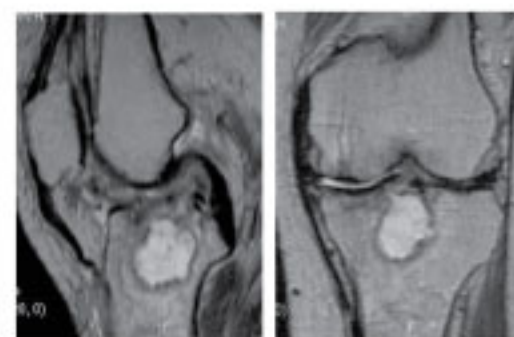


Fig. 2 MRI findings, postoperative 16 months

Heterogeneous T2 high signal lobulating lesion in proximal tibia Diffuse marginal sclerotic lesion & Edematous lesion around tibial lesion

Curettage
Arthroscopic synovectomy

- Operative finding
 - Purulent material in bone cyst
 - Severe synovitis in knee joint
- Open drainage of abscess & Curettage targetted by ACL tibial guide
- Total synovectomy & Continuous irrigation in knee joint
- G(-) & No growth of microorganism



Final results

- Symptoms
 - No knee joint pain postoperatively 2 months
- Laboratory findings
 - Complete normalization postoperatively 3months

Discussion

- Brodie abscess
 - Localized form of subacute osteomyelitis
 - Metaphysis or Metaphyseal-epiphyseal area is most affected site
 - Intermittent pain of long duration with local tenderness over affected area
 - No Report of affected Sx. & Sign in adjacent joint

Summary

- A case report of infectious arthritis associated w Brodie abscess in knee joint
- In relapsed infectious arthritis after conservative or operative treatment Consider additional bony infective condition including Brodie abscess