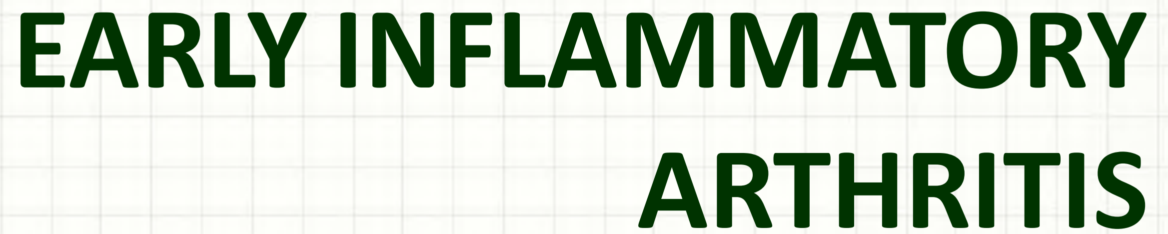


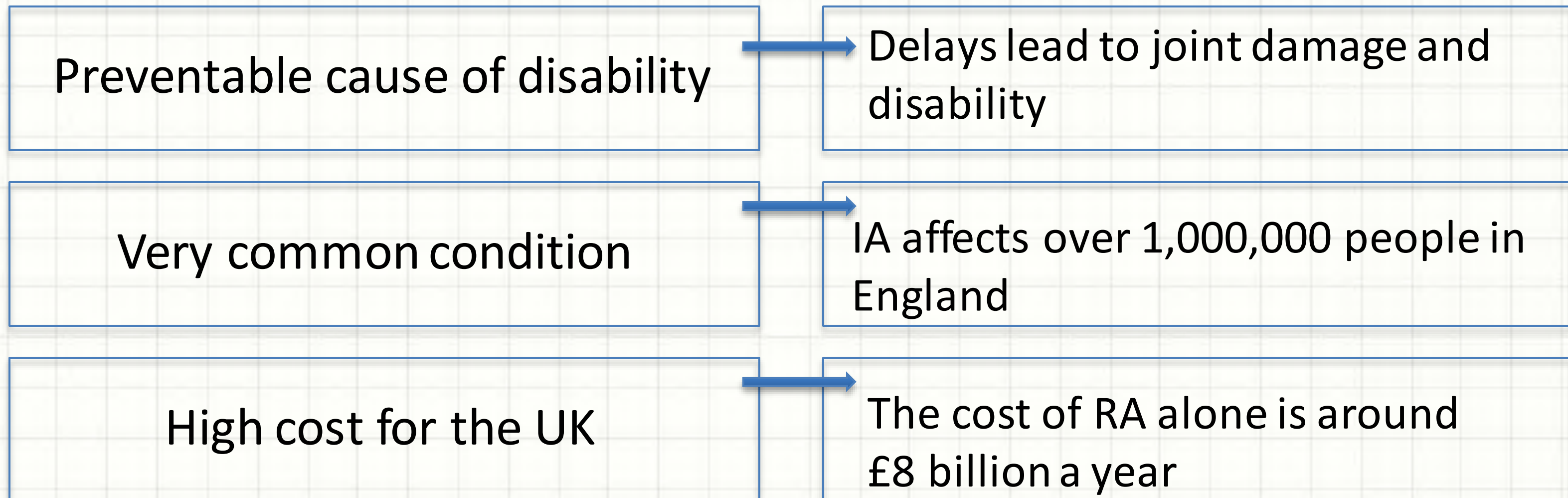
Cristina Tacu

Consultant Rheumatologist

Brighton and Sussex University Hospital

EIA: Introduction

National priority



Various forms of IA

- most common: RA (Rheumatoid Arthritis)
- other forms: PsA (Psoriatic Arthritis), Spondylarthropathy with peripheral arthritis, UIA (Undifferentiated Inflammatory Arthritis)

EIA Clinics in BSUH

- One clinic in Princess Royal Hospital (one consultant + one Registrar)
- One clinic in Royal Sussex County Hospital (one consultant + one Registrar)
- Nurse led clinics (DMARD Escalation)
- Two Rheumatology Consultants trained for MSK Ultrasonography for synovitis screening

sEIA: Referral Process

- NICE QS1

"people with suspected persistent synovitis affecting the small joints of hands and feet, or more than one joint are referred to a rheumatology service **within 3 working days** of presentation"

- NICE QS2

"People with suspected persistent synovitis are assessed in Rheumatology service **within 3 weeks** of referral"

- EULAR recommendation no.1 for EIA

"Patients presenting with arthritis (any joint swelling, associated with pain or stiffness) should be referred to, and seen by a rheumatologist, within 6 weeks after the onset of the symptoms."

Recognition

All suspected EIA patients:

- Full history & Clinical Examination
- Laboratory tests (RF, CCP-Ab, ESR, CRP, ANA, FBC, other relevant immunological tests)
- Plain film Radiography

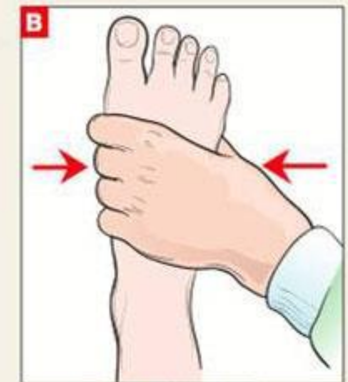
In selected patients:

- Serologic studies for infection (for human parvovirus B19, HBV, HCV, Lyme disease, chikungunya virus infection)
- synovial fluid analyses (cell count and differential, crystal search, Gram stain and culture)
- MRI or US scan for joints

sEIA: Full History and Clinical Examination

- Persistent joint inflammation **≥ 6 weeks** in 2 or more joints
  - Tenderness over the joint line
  - Joint swelling
  - Painful limited ROM
- Morning stiffness ≥ 30 minutes
- Duration of **symptoms < 1 year**

- MCP and /or MTP positive squeeze test



- Joint stiffness following periods of immobility
- Significant benefits from NSAIDs
- Strong Family History

RA Recognition Clinical Examination

Typical 'classical' RA

- pain, stiffness and swelling of many joints
- MCPs, PIPs, MTPs joints

- **Palindromic RA**
  - One to several joint areas affected sequentially for hours to days
- **Monoarthritis**
  - The interval between monoarthritis to polyarthritis may extend from days to several weeks

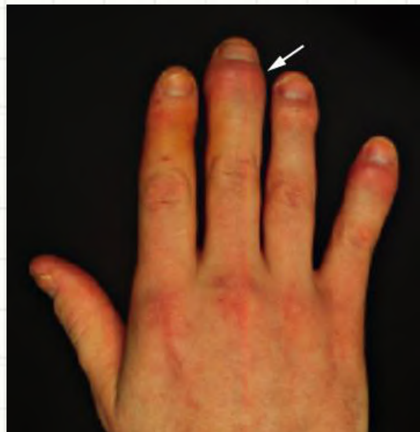
PsA Recognition Clinical Examination

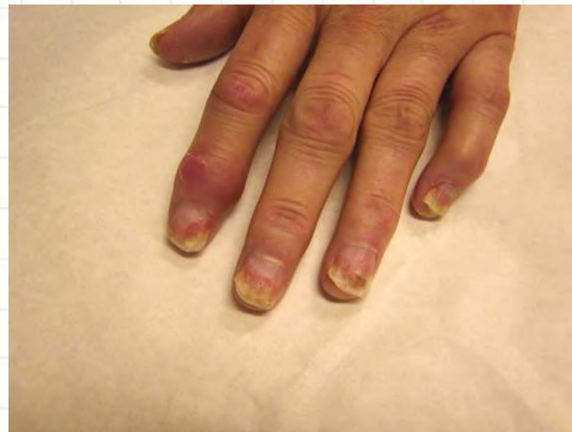
Arthritis

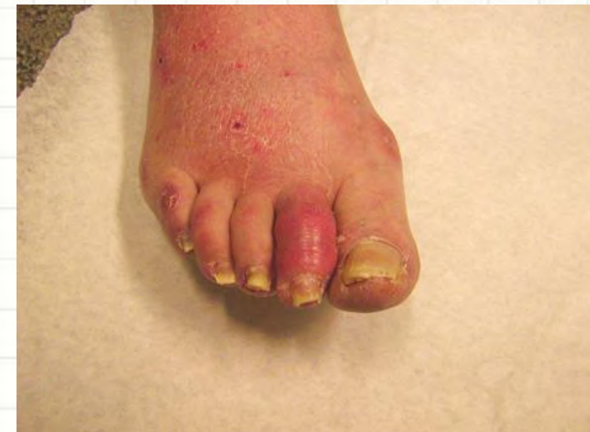
- Distal Arthritis
- Asymmetric oligoarthritis
- Symmetric polyarthritis
- Arthritis mutilans
- Spondylarthritis

Periarticular Disease

- Enthesitis
- Tenosynovitis
- Dactylitis







©2017 UpToDate®

Seronegative Spondyloarthritis

- Ankylosing spondylitis (AS)
- non-radiographic axial spondyloarthritis (nr-axSpA)
- Peripheral SpA
- SpA associated with psoriasis

Low back pain/imflammatory back pain

Dactylitis (sausage digit)

Peripheral arthritis

- Knees and ankles
- Asymmetrical
- Only one or 3 joints usually

Enthesitis

- Achilles tendon
- Plantar fascia
- Iliac crests
- greater trochanters
- Manubrial-sternal joints
- Epicondyles at the elbows

Other MSK features

- Anterior chest wall pain
- Rib cage pain

EIA detection

Serology:

- RF 70-80% of patients with RA
  - low specificity
  - High titers = at least 3 times the ULN

- CCP antibodies
  - Similar sensitivity for RF for RA
  - High Specificity 95-98

Acute Phase Reactants:

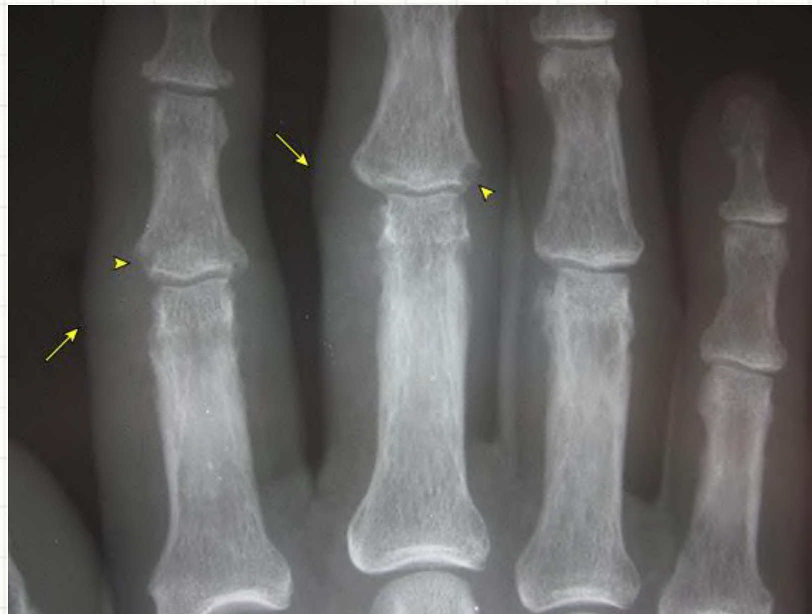
- Normal Reactants:
  - very infrequent in untreated RA
  - Useful to distinguish from OA and fibromyalgia

- ESR 50-80
  - Severely active RA
- ESR 20-30
  - Mild to moderate active joints

EIA: Radiographs hands wrist and feet

- Baseline for monitoring disease progression
- Joint erosion?
- Alternative diagnosis (e.g. chondrocalcinosis, OA)

Erosions in the PIP joints



©2017 UpToDate® Courtesy of Richard Waite, MD.

sEIA: Synovitis Recognition

EULAR Recommendation no.2 for EIA:

"Clinical examination is the method of choice for detecting arthritis, which may be confirmed by **ultrasonography (US)"**

"several studies suggested greater sensitivity of US scan than clinical exam in detecting synovitis in the knee and the small joints."

EIA Recognition- MSK Ultrasonography

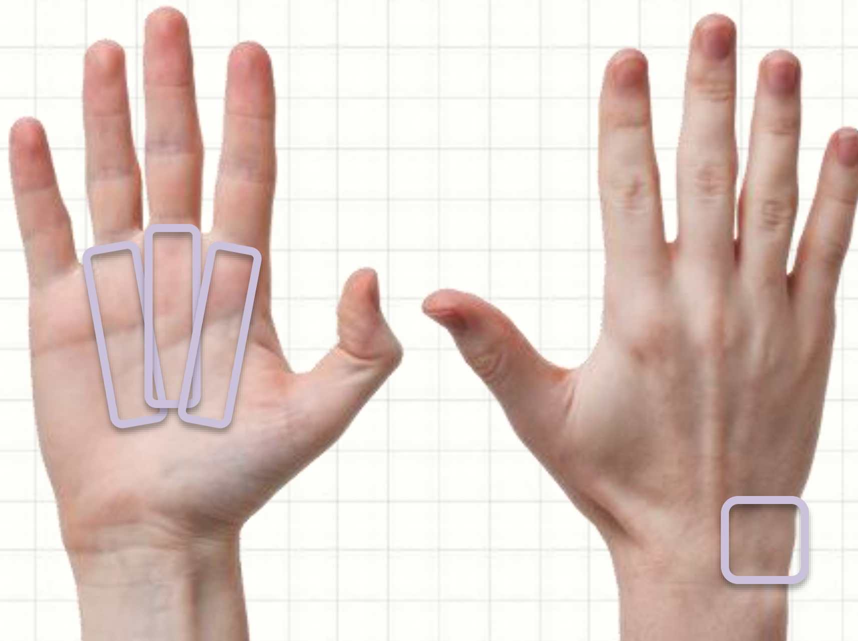
Joint

2nd MCP	Synovial hypertrophy
5th MCP	Hyperemia (Power Doppler Signal)
5th MTP	Bone erosion

EIA Recognition- MSK Ultrasonography

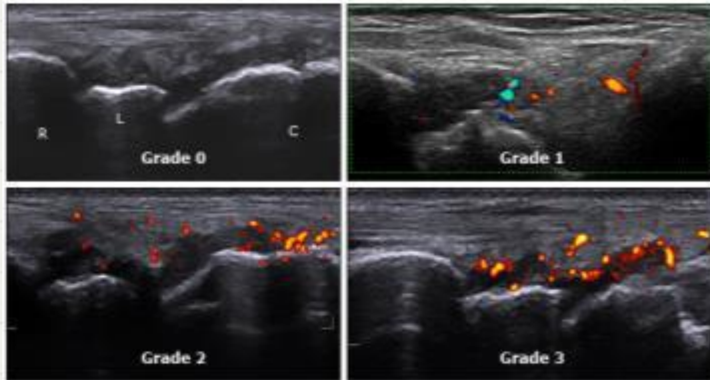
Tendon

- ECU (Extensor Carpi Ulnaris)
- Flexor tendon- 2nd, 3rd, 4th fingers

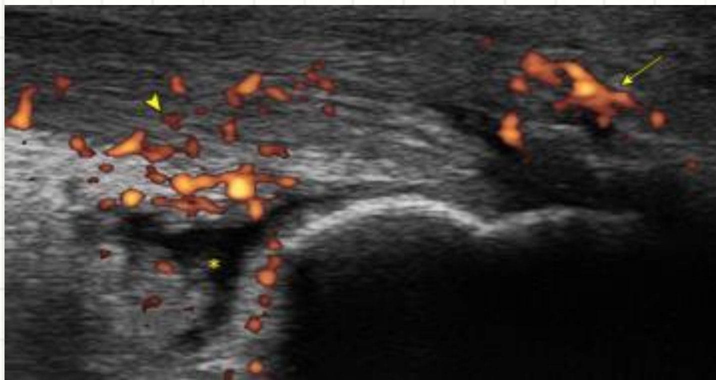


- Widening of the tendon sheath
- Synovial hypertrophy
- Hyperemia
- Loss of Fibrillar texture
- Enthesitis

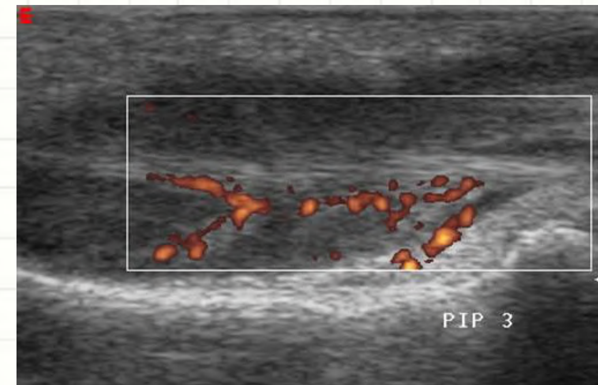
EIA Recognition- MSK Ultrasound



Wrist: Power Doppler in rheumatoid arthritis



Achilles tendon: Tendonitis, Enthesitis and retrocalcanean bursitis



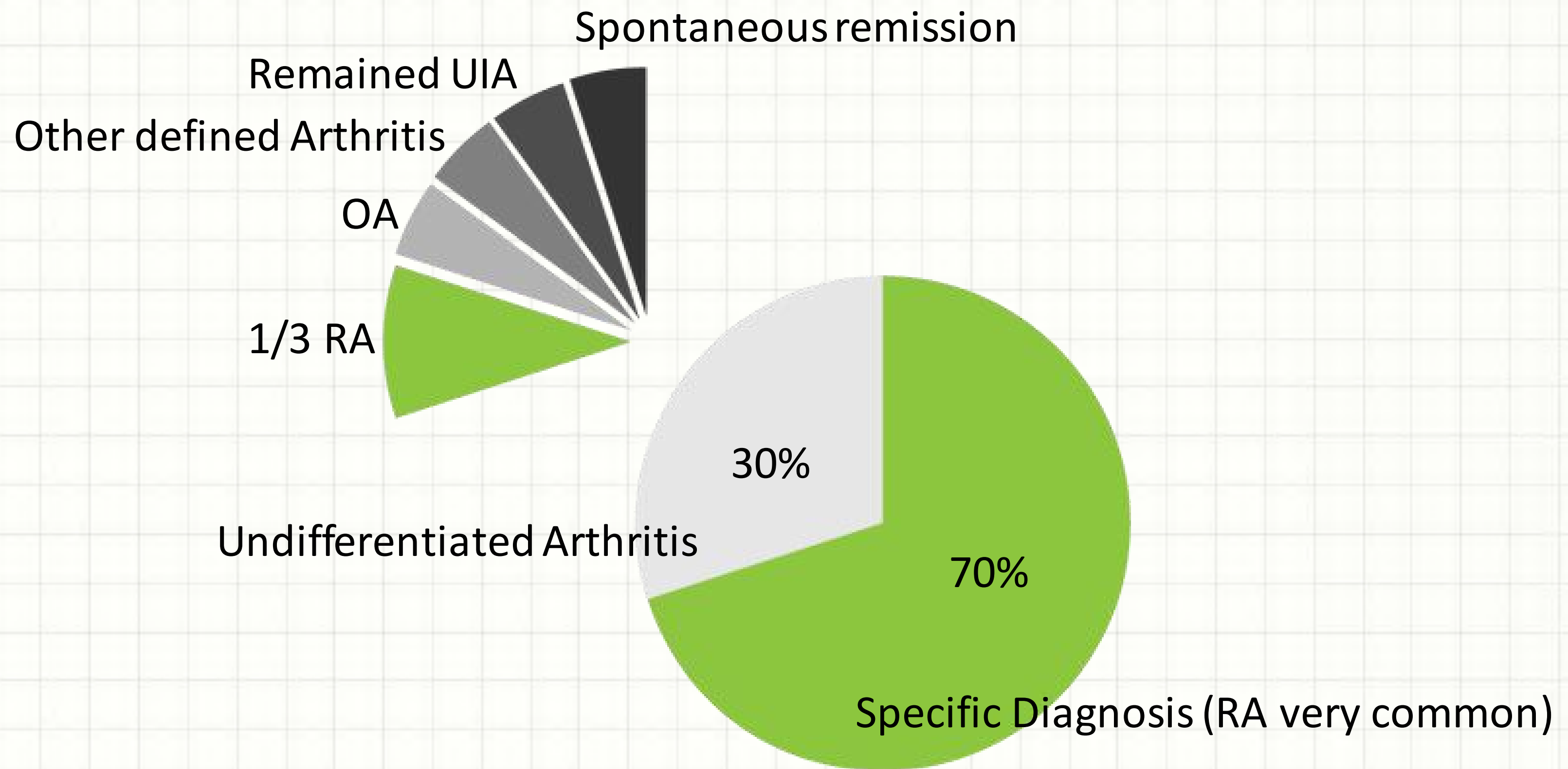
Finger flexor power doppler signal

©2017 UpToDate® Courtesy of George AW Bruyn, MD, PhD.

EIA: MRI for early detection

- lack of specificity as suggested by the prevalence of MRI abnormalities in the normal population
- long scanning time
- limited access
- relatively high cost
- to be used in very difficult cases or in patient with specific form of arthritis

sEIA Recognition: Diagnostic Outcome



EIA Early Management

- NICE QS3

"people with newly diagnosed **rheumatoid arthritis** are offered short term glucocorticoids and a combination of DMARDs by a rheumatology service within 6 weeks of referral"

- EULAR recommendation no.5 for EIA

"Among the DMARDs, **methotrexate (MTX)** is considered the anchor drug and unless contraindicated, should be part of the first treatment strategy in patient at risk of persistent disease"

Early RA confirmed: Management Protocol

<table>
<tr><th>DAS28>5.1</th><th>DAS28 3.2-5.1</th><th>DAS28 <3.2</th></tr>
<tr><td>Prednisolone
30mg od 1/52
25mg od 1/52
20mg od 1/52
15mg od 1/52
10mg od 1/52
5mg od 1/52 then stop</td><td>IM Depomedrone 80 – 120mg or IA if necessary</td><td rowspan="2">Poor prognostic features*
Sulfasalazine
Methotrexate
Leflunomide

No poor prognostic features
Hydroxycloroquine
Sulfasalazine
IA injections

*CCP / RhF +ve, erosive, high HAQ-DI, raised CRP/ESR, FH RA</td></tr>
<tr><td colspan="2">• Methotrexate 15mg weekly (escalate by 2.5mg weekly to target does 20-25mg weekly if needed)
• Folic acid 5mg weekly
• Hydroxychloroquine 200mg bd (max 6mg/kg) 3/12 then reduce to od</td></tr>
</table>

Courtesy of **Rizwan Rajak** , Consultant Rheumatologist Croydon University Hospital

Early RA confirmed: Management Protocol

Medical Review at 3 months		
DAS28>5.1	DAS28 3.2-5.1	DAS28 <3.2
• IM / IA /IV steroids as indicated • Consider MTX/SASP/HCQ • Consider MTX/Lef/HCQ	**No / poor response** • Consider combination with SASP /Lef • Consider IM / IA steroids **Response** • Aim for DAS28 <3.2 • Negotiate desired control with patient	• Negotiate desired control with patient • IA steroids if indicated
Medical Review at 6 months		
DAS28>5.1	DAS28 3.2-5.1	DAS28 <3.2
• Begin planning for Anti-TNF - 2nd DAS assessment 1 month later in specialist burse clinic • Check Anti-TNF screening tests • -Consider low dose steroids after 2nd DAS obtained until anti-TNF funding application complete	**No/poor response** • Aim for DAS28 <3.2 • Consider combination with SASP/Lef • Consider IM/IA steroids • 3-6 monthly review until satisfactory disease control	Consider annual review alone for well controlled stable patients

Courtesy of **Rizwan Rajak** , Consultant Rheumatologist Croydon University Hospital

Undifferentiated Inflammatory Arthritis

- diagnosis of exclusion
- 1/4 to 1/3 of the assessed patients in EIA clinic
- ≥ 1 clinical swollen joint in the absence of further abnormalities sufficient to meet criteria for a specified alternative diagnosis
- Diagnostic evaluation:
  - History & Physical examination
  - Laboratory testing
  - Arthrocentesis (? infection ? crystal arthritis)
  - Imaging studies (US scan/MRI scan)
- Usually within a year UIA evolved to a specific diagnosis

UIA Management

EULAR Recommendation no.4 for EIA:

"Patient at risk of persistent arthritis should be started on DMARD as early as possible (ideally within 3 months), even they do not fulfill classification criteria for an inflammatory rheumatological disease."

UIA that resembles RA

(with prominent upper extremity involvement and /or + RF/CCP-Ab)

MTX

UIA that resembles SpA

(primarily lower extremity involvement and seronegative RF/CCP-Ab

SSZ

EIA Non Pharmacological Management

- NICE QS4

“Educational and self management activities within 1 month of diagnosis”

EULAR Recommendation no.10 and 12 for EIA

“education programs aimed at coping with pain, maintenance of ability to work and social participation may be used at adjunctive therapy”

BSUH :

Referral to physiotherapy (dynamic exercises) and occupational therapy

EIA: Overall Patient Care

- Smoking cessation
- Dental Care
- Weight control
- Assessment of vaccination status
- Management of comorbidities
- Patient information concerning the disease its outcome and its treatment

EIA: Overarching Principle

“management of early inflammatory arthritis should aim at the best care and must be based on a shared decision between the patient and the rheumatologist”

NICE QS5

Monthly treatment escalation until the disease is controlled to an agreed low disease activity target

NICE QS6

If needed patient should receive advice within one working day of contacting the rheumatologist service

NICE QS7

Comprehensive annual review

Resources

- National Clinical Audit for Rheumatoid and Early Inflammatory Arthritis

  www.nras.org.uk

- 2016 update of the EULAR recommendations for the management of early arthritis

  www.ard.bmj.com

QUESTIONS?