

Systemic forms of stiffness

ANNA LITWIC

CONSULTANT RHEUMATOLOGIST SALISBURY DISTRICT HOSPITAL

CLINICAL RESEARCH FELLOW MRC LIFECOURSE EPIDEMIOLOGY UNIT

Overview

Rheumatoid arthritis

Know it when you see it

Rheumatoid arthritis

Rheumatoid arthritis affects 1% population

Occurs at any age, but peaks between 30 and 50 years

Results in pain, damage and disability

High costs (£8billion to UK economy)

DOH drugs costs, NRAS 2010

- Costs to NHS, sick leave, work related disability, 500,000 receive DLA
- 40% patients lose job by 5 years diagnosis

RA etiology and pathophysiology

Genetic susceptibility is evident in familial clustering and monozygotic twin studies, with 50 percent of RA risk attributable to genetic factors

MacGregor AJ et al. *Arthritis Rheum.* 2000;43(1):30–37

Smoking is the major environmental trigger for RA

Bang SY et al. *Arthritis Rheum.* 2010;62(2):369–377

Infections may unmask an autoimmune response, but no particular pathogen has been proven to cause RA

Wilder RL et al. *Clin Orthop Relat Res.* 1991;(265): 36–41

RA is characterized by inflammatory pathways lead to proliferation of synovial cells in joint

Scott DL et al. *Lancet.* 2010;376(9746):1094–1108

RA typical presentation

Symmetrical and polyarticular

- wrists, MCPJ and PIPJ are most commonly involved

Inflammatory synovitis

- Palpable synovial swelling
- Morning stiffness >1 hour

Systemic symptoms

- fatigue, weight loss, and low-grade fever

RA typical presentation



2010 ACR/EULAR

Classification Criteria for RA

JOINT DISTRIBUTION (0-5)

1 large joint	0
2-10 large joints	1
1-3 small joints (large joints not counted)	2
4-10 small joints (large joints not counted)	3
>10 joints (at least one small joint)	5

SEROLOGY (0-3)

Negative RF <u>AND</u> negative ACPA	0
Low positive RF <u>OR</u> low positive ACPA	2
High positive RF <u>OR</u> high positive ACPA	3

SYMPTOM DURATION (0-1)

<6 weeks	0
≥6 weeks	1

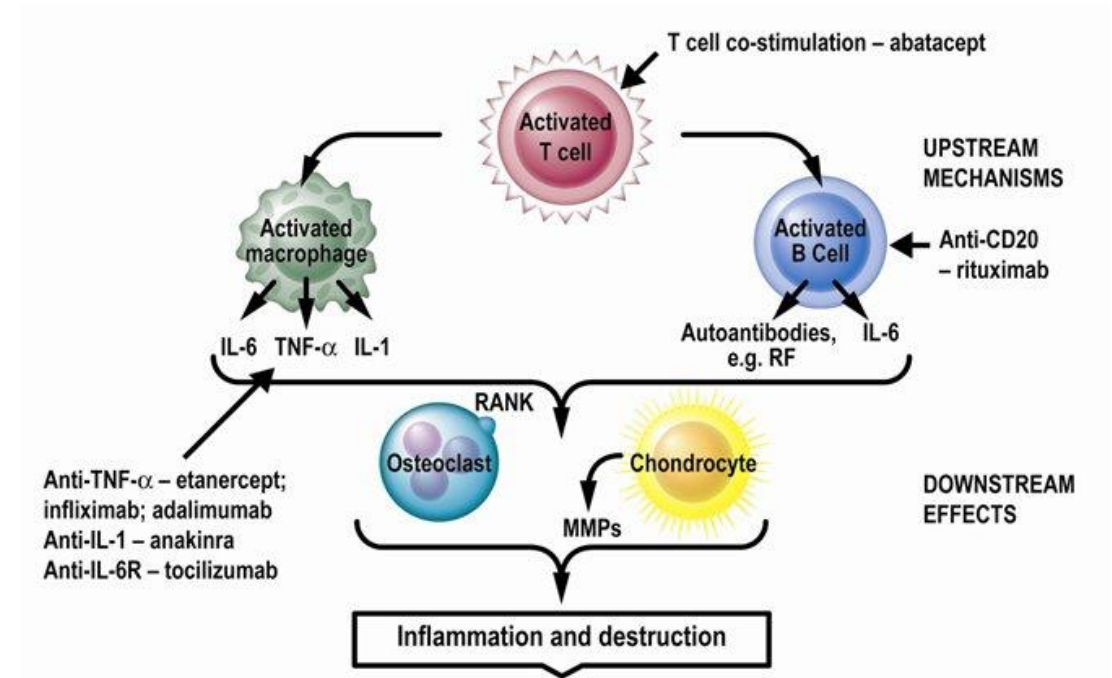
ACUTE PHASE REACTANTS (0-1)

Normal CRP <u>AND</u> normal ESR	0
Abnormal CRP <u>OR</u> abnormal ESR	1

RA treatment

Dramatic advances have been made in the treatment of RA by effective use of traditional disease modifying agents (DMARDs) and biologic therapies.

Early treatment is essential to reduce the impact of disease.



Quiz















© ACR





Know It When You See It



Know It When You See It



Know It When You See It

Osteoarthritis

- Hard bony enlargements
- Heberden's nodes at the DIP joints
- Bouchard's nodes at the PIP joints
- Often have “squared” first CMC joint due to osteophytes at that joint



Know It When You See It



Know It When You See It

Rheumatoid arthritis

- Soft synovial swelling
- Synovitis and volar subluxation at the MCP joints
- Synovitis of the wrists
- Synovitis of the PIP joints with early swan neck deformities





© ACR

RA: Swan Neck and Boutonnière Deformities



Late-stage findings indicating serious changes in the joints

Swan neck (digits 2 to 4) PIP extension DIP flexion

Boutonnière (digit 5) is the reverse; PIP flexion DIP extension

Know It When You See It



Know It When You See It

Tendon rupture in RA

- Inability to extend fourth and fifth digits
- Due to deformity and inflammation at the wrist causing excess wear of the extensor tendons





Know It When You See It

Psoriatic arthritis

- Inflammation of the DIP joints
- Sausage fingers
- Nail changes
- Psoriatic patches
- Arthritis may start before the skin



Know It When You See It



Know It When You See It

Systemic lupus erythematosus

- Interarticular dermatitis
- Also has periungual erythema
- This rash is distinct from that seen in dermatomyositis that occurs over the joints



Know It When You See It



Know It When You See It

Dermatomyositis

- Scaly rash over the extensor surfaces of the interphalangeal joints



Know It When You See It



Know It When You See It

Livedo reticularis

- Appears in a broad-based interrupted pattern in systemic vasculitis, including SLE
- May occur as a fine, connected, lacy pattern in normal variant





Know It When You See It

Gouty tophus on finger

- Note the yellow- orange color typical of a tophus
- Patient also has swelling of the PIP of the index and fifth digits





Know It When You See It

Hypertrophic osteoarthropathy

- Clubbing with loss of nail angle
- Full syndrome includes periostitis of ends of long bones and arthritis
- Associated with
 - Chest malignancies
 - Chronic lung infection
 - Pulmonary, cardiac, hepatic disease



Thank you
