

# Rheumatoid Arthritis & Other Rheumatic Disorders

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# Rheumatoid Arthritis

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- A chronic systemic autoimmune disease with a genetic predisposition

# Diagnostic criteria

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- Morning stiffness  $\geq 1$ h
- Swelling in  $\geq 3$  joints
- Rheumatoid nodules
- Radiographic changes of the hand including bony erosions and decalcification
- Symmetric arthritis
- Serum rheumatoid factor
- Arthritis of the hand (MCP, PIP) and wrist
- have  $\geq 4$  of 7 criteria for a 6 week period

# epidemiology

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- Worldwide prevalence
- 0.2 – 5.3% of populations
- 3.4/10000 women ( 3yr reduction in life expectancy )
- 1.4/10000 men ( 7 yr reduction in life expectancy)

# pathophysiology

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- Genetic: HLA DR4 Chromosome 6  
genetic susceptibility with environmental triggers
- Serum anti IgG found in 60 -80% ( Rheumatoid factor)  
( serum IgM antibody against native IgG antibodies)
- Have massive T cell infiltration & B cell reactivity

# pathoanatomy

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- antigen-antibody and antibody-antibody reactions >
- microvascular proliferation and obstruction >
- synovial pannus formation (histology shows prominent intimal hyperplasia)
- joint subluxation, chondrocyte death/joint destruction, and deformity >
- tendon tenosynovitis and rupture

# Pathologic changes

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- Stage I: synovitis. Inflammation of synovium  
polymorphs, lymphocytes, plasma cells
- Stage II: destruction of joint and tendon  
erosion at margins of the joint
- Stage III: deformity results from destruction of cartilage, bone, capsule  
tendons with ensuing mechanical and functional effects.

## Extra articular tissues

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- Rheumatoid nodules / lymphadenopathy
- rheumatoid vasculitis
- Pericarditis /pulmonary disease /GIT / brain
- Splenomegaly
- Myopathy / neuropathy



## Clinical presentation

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- Variable presenting patterns
- May present with general malaise, tiredness, muscle pain, wt loss
- Typically have insidious pain, stiffness and symmetrical swelling of small joints MCP, PIP, wrists ....feet knees shoulders

## Clinical Features

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- Polysynovitis
- Stiffness pain and swelling in 30 – 40 yr olds
- Scleritis, lymphadenopathy, skin atrophy, neuropathy

# hands

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swelling



deformities



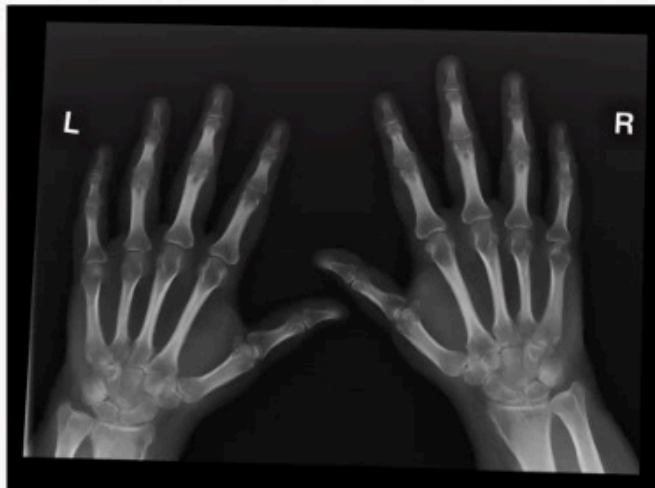
# Investigations

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- X-Rays: periarticular osteoporosis with marginal bony erosions  
atlantoaxial subluxation
- Blood: anaemia, ESR & CRP elevation. RF 80% , ANF 30%  
anti CCP (cyclic citrullinated peptide) anti MCV (mutated  
citrullinated vimentin)
- Synovial biopsy

# Xrays

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- Reduced jt space
- Periarticular osteopenia
- Subarticular erosions

# More advanced RA

hand



foot



# Treatment

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Multidisciplinary / holistic

- Stop synovitis: NSAIDS, DMARDS
- Prevent deformity: PT/OT
- Reconstruct: osteotomy, tendon repairs, arthrodesis, arthroplasty
- Rehabilitate: Councelling, PT / OT

## complications

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- Varied due to systemic nature of disease thus affecting multiple structures and organs.
- Deformities and loss of function
- Sarcoidosis



# Atypical forms & differentials

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- Ankylosing Spondilitis - SI jt , spine facet joints, costovertebral jts
- Psoriatic arthritis – nails
- Reiters syndrome - urethritis, colitis, conjunctivitis
- Enteropathic arthritis – Chrohns dx, Ulcerative colitis
- Juvenile chronic arthritis
- Systemic Connective Tissue diseases (eg SLE)

## Outcome/ Prognosis

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- 10% improve after initial attack
- 60% intermittent
- 20% severe
- 10% disabled

Thank

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You