

Negotiating Optimal Care of Rheumatology Patients Through the Maze of Comorbidities



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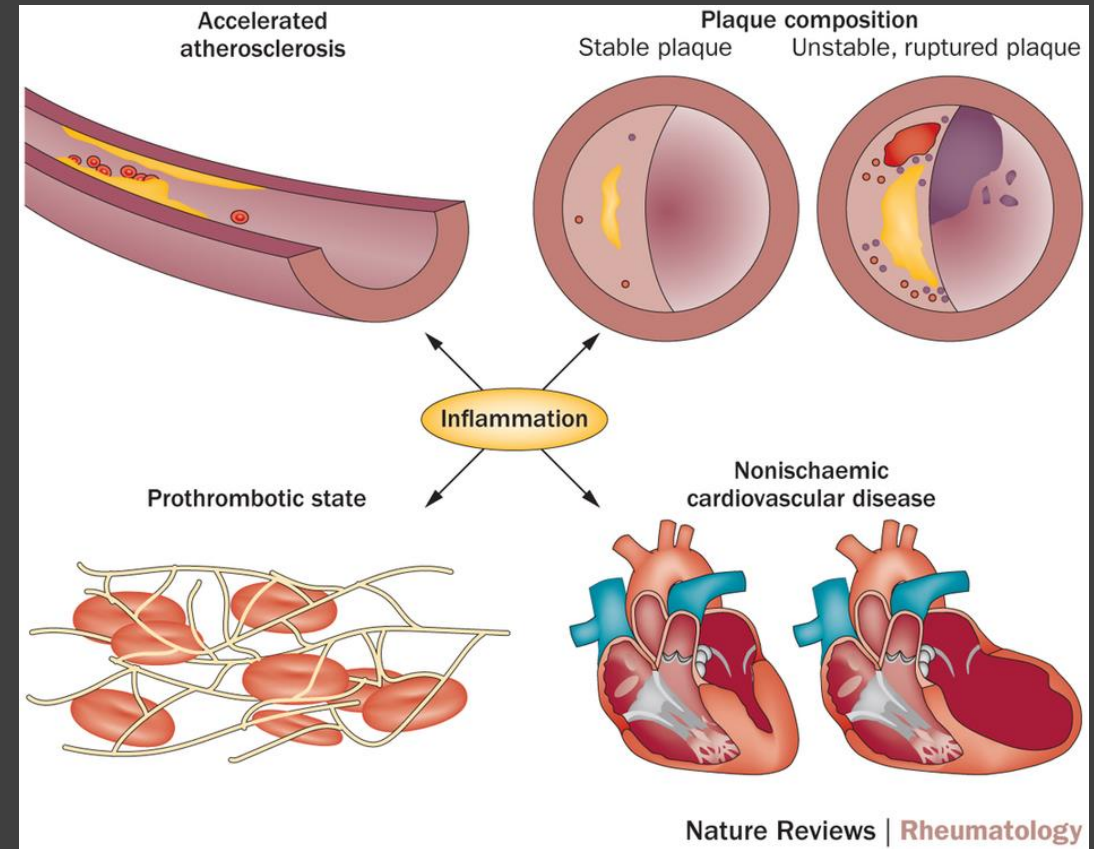
Comorbidity or disease complication

Inflammation associated with increased risk:

- IHD
- CVA
- COPD
- Insulin resistance

IHD in RA is comparable to the risk incurred with diabetes

- Tight control of inflammation reduces the risk
- Therapeutic window early in disease course for prevention
- ? preventative window of opportunity during preclinical RA
- 50% increase risk MI/CVA in RA



Increased atherosclerosis not fully explained by ordinary risk factors


- Drug naïve patients with early RA show carotid artery inflammation
- Baseline RA disease activity independently associated with the risk of major adverse CV effect

Modification of risk factors

- Smoking
- Obesity
- Hypertension
- Lack of exercise
- Corticosteroids
- NSAID
- Impaired glucose tolerance
- Dyslipidemia

**SMOKING AND RHEUMATOID ARTHRITIS (RA)
A JOINT PROBLEM**

The facts speak for themselves



Smoking may make your treatment for RA less effective²⁻⁴

Generally, RA symptoms may be more severe in smokers than non-smokers⁵

Heavy smoking (smoking more than 20 cigarettes a day for 20 years) may significantly increase the risk of developing RA¹

Quitting smoking is one of the best things you can do for your RA¹⁻⁴

The image shows a close-up of a human hand with five black circles placed on the joints of the fingers. White lines connect these circles to five callout boxes containing text. The background is a solid blue color.

Multidisciplinary approach

- Lifestyle change
- Increase daily exercise
- Smoking cessation
- BP monitoring
- Lipid monitoring (lower treatment threshold)
- Personalised program

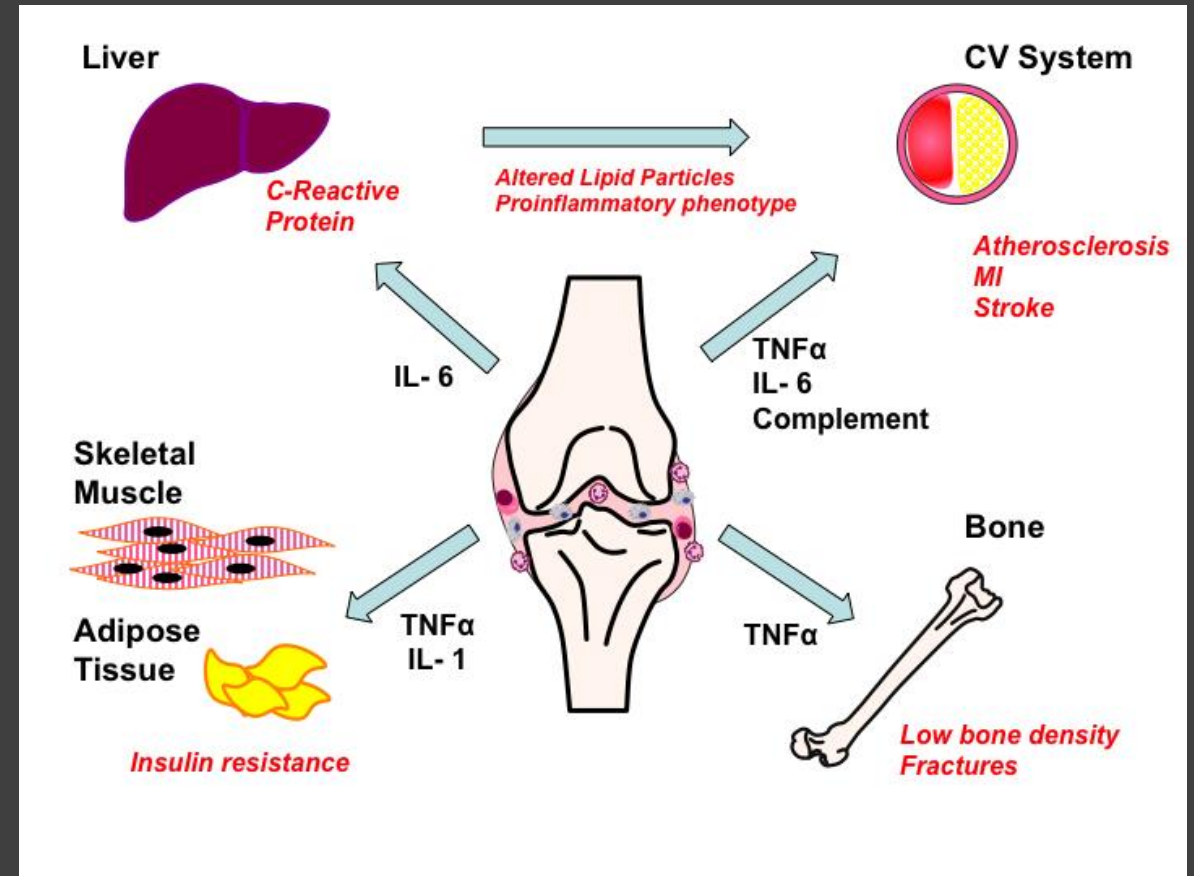


Communication preventative care strategies

- General practitioner
- Rheumatologist
- Patient
- Regular review/monitoring

Aggressive early anti-rheumatic therapy

- Change course of disease
- Prevent progressive joint destruction
- Prevent disability
- Lower risk of atherosclerotic disease



Long-term systemic complications of rheumatoid arthritis. Inflammatory mediators produce effects in multiple organ systems that result in increased rates of metabolic syndrome, osteoporosis, cardiovascular disease & increased mortality that are not explained by traditional risk factors. Implicated cytokines include TNF- α , IL-1, IL-6 & complement immune complexes. (Adapted from McInnes & Schett, 2011).

Risk factors in RA

- Genetics-individual risk
- Systemic autoimmunity precedes development of synovitis
- Smoking results in citrullination of lung proteins in genetically susceptible individuals
- Other environmental exposures (e.g. silica)
- Periodontitis
- Microbiome
- Obesity
- Hormonal

Gout comorbidity

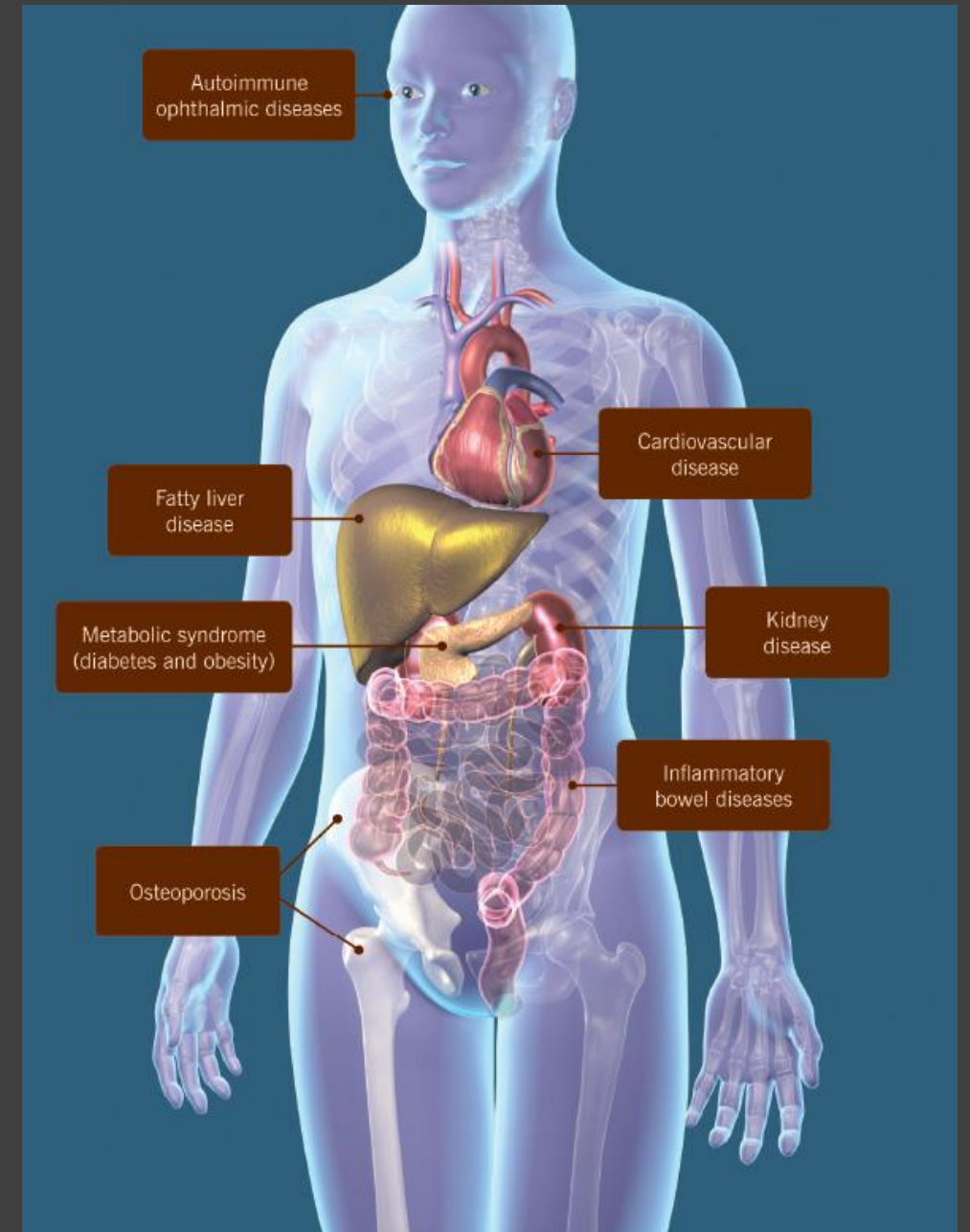
- Hypertension
- Cardiovascular disease (urate independent risk factor)
- Renal impairment
- Diabetes
- Hyperlipidemia
- Obesity/Metabolic syndrome
- Atrial fibrillation

Treatment

- Cease thiazide diuretic
- Spironolactone no effect on serum urate
- ACE inhibitors/Ca channel blockers lower serum urate
- Indomethacin lowers serum urate
- Low dose aspirin reduces renal urate excretion
- Effective allopurinol dose
 - Lowers BP
 - Slows progression of renal disease
- Febuxostat
- Colchicine

Psoriatic arthritis

- Obesity/metabolic syndrome
- Diabetes RR 2.18
- Cardiovascular disease RR 1.4
- Inflammatory bowel disease RR 6.43
- Non-alcoholic steatohepatitis
- Autoimmune eye disease uveitis
- Osteoporosis
- Depression/anxiety 30%
- Fibromyalgia 53%



Systemic lupus erythematosus

- Cardiovascular disease RR 1.65
- Osteoporosis (separate to steroid use) RR 1.92
- Sjogrens
- Autoimmune thyroid disease
- Cerebrovascular disease RR 1.47
- Venous thrombosis
- Malignancy lung/lymphoma/breast
- Autoimmune hepatitis
- Infection RR 1.1
- End stage renal failure
- Fibromyalgia/fatigue/depression

SLE cardiovascular risk

- Smoker RR 2.6
- Positive anticardiolipin RR 4.2
- Increase 2.4 fold every 10 years of disease
- Corticosteroid use
- Protective thrombocytopenia/hydroxychloroquine

Spondyloarthritis (B27)

- Ankylosing spondylitis
- Psoriatic arthritis
- Reactive arthritis
- IBD associated
- Undifferentiated

SPA

- Gastroduodenal ulcers NSAID
- Hypertension
- Myocardial infarct
- Stroke
- Osteoporosis/vertebral fracture
- Sleep apnea
- Lung disease

Scleroderma

- Interstitial lung disease
- Calcinosis
- Digital ulcer
- Pulmonary arterial hypertension
- Malignancy
 - Lung cancer RR 4.35
 - Hematological neoplasm RR 2.24
 - Breast cancer RR 1.05