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
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 erythematosis

• 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