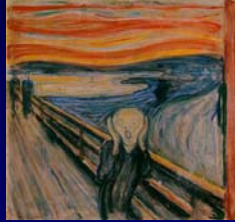


Inflammatory rheumatic diseases

Bruce Kidd

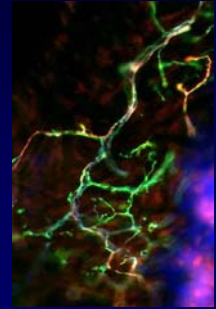
Barts & The London,
Queen Mary, University of London



Learning objectives

To understand:

1. prevalence and range of the rheumatological disorders
2. clinical features of rheumatoid arthritis
3. approach to diagnosis & therapy

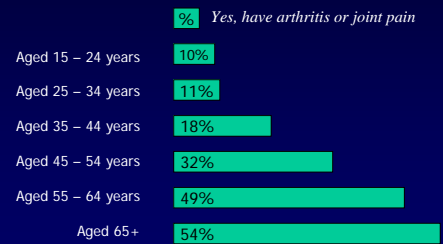


Prevalence of arthritis and joint pain

Do you have, or have you ever had arthritis or joint pain?

Prevalence of arthritis and joint pain

Do you have, or have you ever had arthritis or joint pain?



Spectrum of rheumatic disease

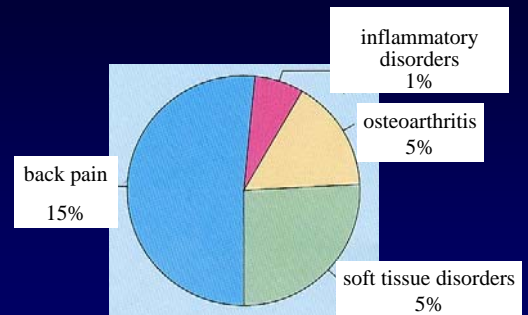


Localized /
acute

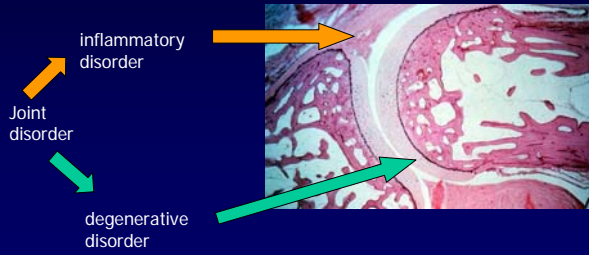


Widespread /
chronic

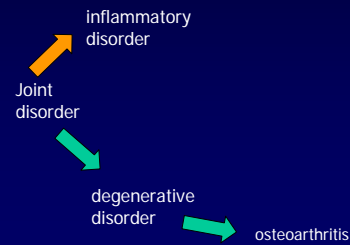
Prevalence of musculoskeletal disorders



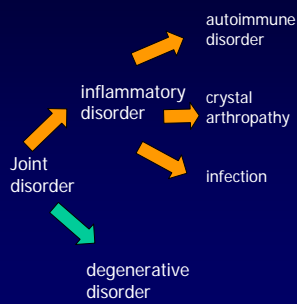
Types of arthritis



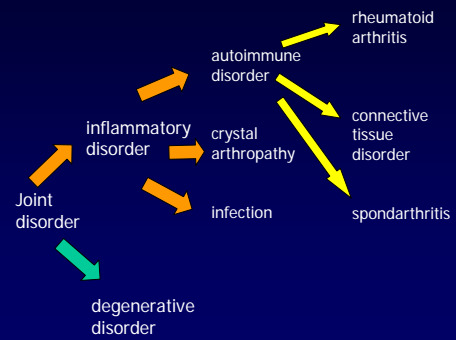
Classification of rheumatic disorders



Classification of rheumatic disorders



Classification of rheumatic disorders



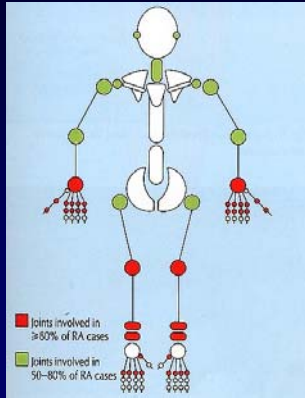
Rheumatoid Arthritis

Rheumatoid arthritis

- Prevalence 387,000 adults in UK (0.81% population)
- Incidence 12,000 new cases each year
- Gender Female : male ratio - 3 : 1
- Peak onset Between 20 - 50 years of age

Features

Symmetrical arthropathy
Hands & feet > 80% cases
Early morning stiffness



Hand involvement in rheumatoid arthritis



Hand involvement in rheumatoid arthritis



Hand involvement in rheumatoid arthritis



Problems in & around the knee in RA



valgus deformity



Bakers cyst

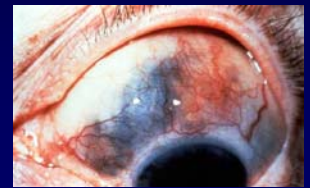
Ocular complications in RA



Keratoconjunctivitis sicca

Scleritis & episcleritis

Scleromalacia perforans

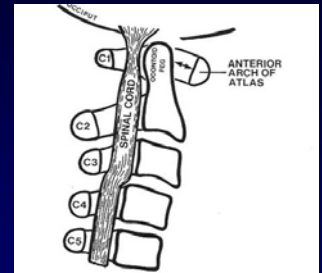


Neuromuscular complications of RA



- Muscle wasting
- Carpal tunnel syndrome - may occur early in disease
- Distal sensory neuropathy
- Mononeuritis multiplex

Neuromuscular complications of RA



Atlanto-axial subluxation

Systemic complications of RA

Cardiac – ischaemic heart disease
 life expectancy reduced by 10 years
 (plus: pericarditis, nodules, endocarditis)

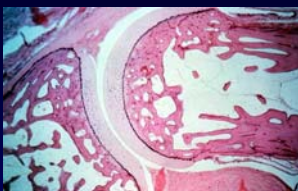
Bones - accelerated osteoporosis

Rheumatoid nodules



- Occur in 20 - 25% of patients
- Mainly in patients with +ve rheumatoid factor test - worse prognosis
- Occur over pressure points - elbow, sacrum, Achilles tendon
- May be made worse with treatment (methotrexate)

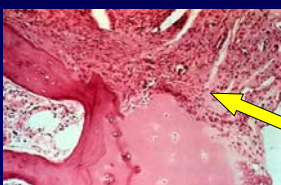
Pathology of RA



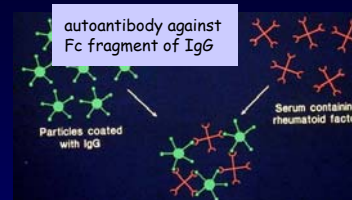
normal joint / synovium



synovitis / destructive pannus



Rheumatoid factors



Rheumatoid factors

RA > 70% +ve

also other rheumatic disorders

sarcoidosis
 infections

old age etc

Frequency of false +ve RF

| | |
|-------------|----------|
| 20 - 60 yrs | 2 - 4 % |
| 60 - 70 yrs | 5% |
| >70 yrs | 10 - 25% |

Xray changes in rheumatoid arthritis



ARA criteria for diagnosis of rheumatoid arthritis

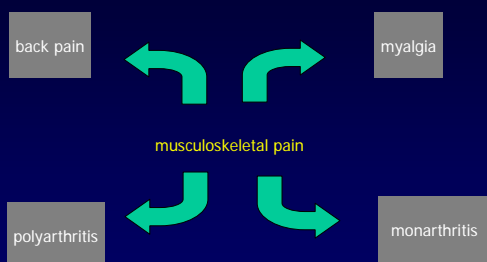
1. Morning stiffness
 2. Arthritis of 3 or more joint areas
 3. Symmetrical arthritis
 4. Rheumatoid nodules
 5. Serum rheumatoid factor
 6. Radiographic changes
- (four or more criteria suggest diagnosis)

History & Examination

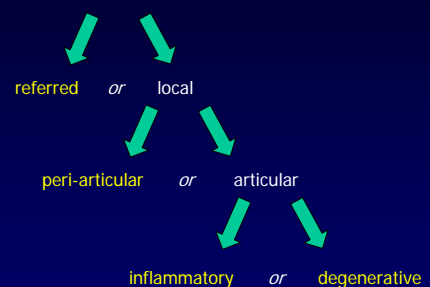
Musculoskeletal history and examination

- History : provides information on pathologic process / diagnosis
- Examination: defines anatomic site of the problem
- History & examination: determines disability

Differential diagnosis of chronic musculoskeletal pain



Musculoskeletal examination



Musculoskeletal history

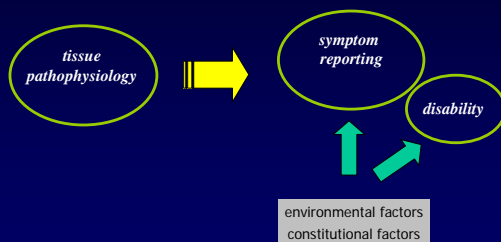
1. Chronological history + distribution
 - episodic, additive etc
 - mono, oligo, poly
 - symmetrical
2. Precipitating factors (infections, trauma, drugs)
3. Responsiveness to therapy
4. Constitutional factors / systemic illness

Recognition of severe disease

Red Flags

- fever or unexplained weight loss
- history of carcinoma
- immuno-suppression
- ill health or presence of other medical illness
- night pain
- progressive pain

Approach to the patient



Psychosocial "yellow flags"

Yellow flags are factors that increase pain and the risk of developing, or perpetuating long term disability and work loss associated with persistent pain

History of numerous episodes
Duration of symptoms
Intensity of symptoms
Anxiety / depression
Locus of control
Catastrophizing

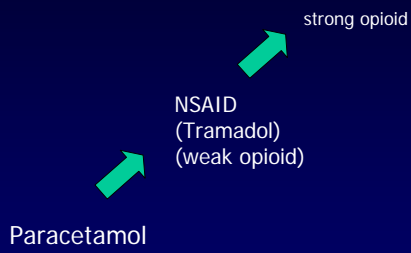
Treatment

Historical treatments or rheumatic diseases

Fact: There have been no new analgesics for at least 500 years



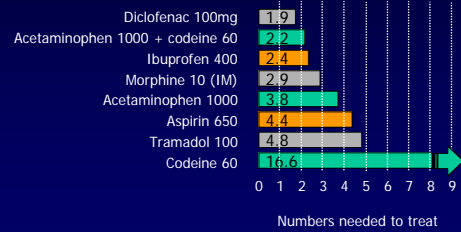
Drug strategies - analgesia



WHO analgesic ladder

Analgesic activities of commonly used drugs

Oxford league table of analgesics in acute pain



Bandolier : www.jr2.ox.uk : 13/8/05

Gastrointestinal toxicity

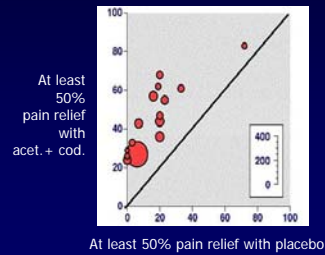
Comparative toxicity

| Drug | Pooled relative risk |
|--------------|----------------------|
| Ibuprofen | 1.0 |
| Aspirin | 1.6 |
| Diclofenac | 2.1 |
| Naprosyn | 2.2 |
| Indomethacin | 2.4 |
| Piroxicam | 3.8 |

- Each year 0.5% - 2% NSAID users develop a serious GI event
- Consider also cardiovascular and renal toxicity
- Estimated 2,000 deaths in UK

Drug combinations – Codeine + acetaminophen

Acetaminophen 600mg plus codeine 60mg vs placebo



Acetaminophen 1000mg plus codeine 60mg

NNT for 50% pain relief 2.2

No serious adverse effects

Moore R et al. Pain. 1997

Indications for disease-modifying agents in RA

1. Active inflammatory arthritis despite optimal NSAID Rx
2. Joint deformity / Xray change / functional impairment
3. Extra-articular manifestations

Drugs - Methotrexate
Sulphasalazine

Gold
Penicillamine

Biologicals

Drug monitoring

FBC, LFT's

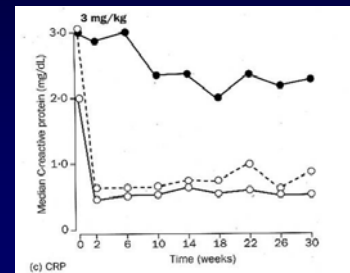
Rashes

Infection (with anti-TNF)

Development of biological therapies

Use of anti-TNF strategies in rheumatoid arthritis

infliximab
etanercept



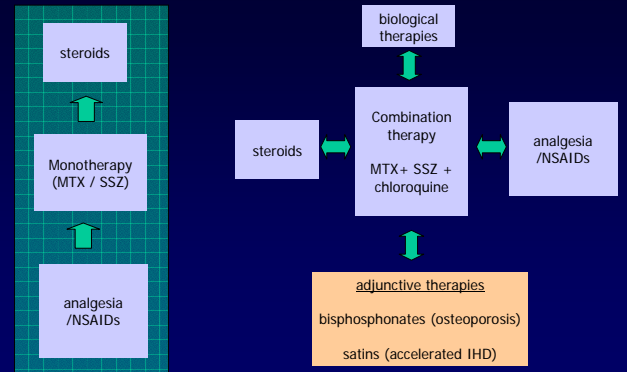
(c) CRP

Evolving strategies for treatment of RA



1950's - 1990's

Evolving strategies for treatment of RA



1950's - 1990's

Conclusions

Musculoskeletal diseases are a leading cause of pain and disability in the community & reflect a wide range of pathologies

Effective therapy requires an appreciation that symptoms reflect more than just the disease – treat the person as well as the disease

Substantial progress has been made over the last decade allowing for significantly more effective therapy for rheumatic diseases