



spouses and family members. A well informed patient is more likely to adopt a positive approach to the disease, and also be more compliant with the therapeutic aims. This is of great importance as the patient will need frequent attention from medical and paramedical specialists over many years.

Local branches of "Arthritis Care" provide the opportunity for mutual support and self help from fellow sufferers, and ARC groups are specifically involved in fundraising to aid research into the rheumatic diseases which are the single biggest cause of disability in the country.

## PHYSIOTHERAPY AND OCCUPATIONAL THERAPY

The importance of early referral to a physiotherapist and an occupational therapist who have specific training and expertise in the management of inflammatory joint disease, cannot be overemphasised. Additional support and education can then be provided and advice given on the role of rest and exercise, the value of joint preservation techniques and where necessary aids and splints provided.

## HOSPITAL MANAGEMENT

Aspects of hospital management are illustrated in figure 3. Early hospital referral is recommended if confirmation of the diagnosis is required, when systemic features or multisystem complications occur and when advice on the timing of second line therapy is required. Early assessment by members of the multidisciplinary team enable appropriate treatment to be planned and further support and advice given,

### Hospital Management

Patient education

Clinical metrology

- Consider — second line therapy  
 — local injection therapy  
 — medical/surgical synovectomy  
 — joint arthroplasty

Treat systemic and multisystem complications

Rehabilitation

Fig.3

## DRUG THERAPY

### Non-steroidal anti-inflammatory drugs

Inflammatory joint disease is the prime indication for NSAIDs. They are effective in reducing joint pain and stiffness and lessening the duration of morning stiffness. No evidence, however, is available that they alter the course of the disease. Whilst it may be rational to prescribe NSAIDs from different drug groups (e.g. propionic acids) such a variable response to different drugs makes this approach unnecessary.

Ibuprofen to a maximum dosage of 1.8g daily is the NSAID of first choice due to its more favourable side effect profile. If it is necessary to ring the changes of the different

NSAIDs before a suitable preparation is found at least 2-3 weeks should elapse before changing agents. It is preferable to limit prescribing to a few well established NSAIDs (figure 4) in which the side effect profile is well known, rather than prescribe the newer preparations which are invariably more expensive. Compliance may be improved with single daily dose preparations, although the majority of patients have no difficulty taking treatment 2-3 times a day when the efficacy is evident. As no synergism has been demonstrated using combination NSAIDs single agents should be prescribed.

### Non-steroidal anti-inflammatory drugs

Diclofenac (Voltarol)  
 Flurbiprofen (Froben)  
 Ibuprofen (Brufen)  
 Indomethacin (Indocid)  
 Naproxen (Naprosyn)  
 Piroxicam (Feldene)  
 Tiaprofenic acid (Surgam)

Fig. 4

The risk of adverse effects from NSAIDs can be lessened by following simple guidelines (figure 5).

If dyspepsia occurs and NSAIDs cannot be discontinued an endoscopy should be performed to establish a diagnosis so that appropriate treatment can be instituted. The addition of an H2 blocker when dyspepsia occurs during NSAID therapy may be inappropriate management and is not recommended. The role of H2 blockers/cytoprotective agents combined with NSAIDs has yet to be established particularly as up to 30% of rheumatoid arthritis patients have asymptomatic peptic ulceration. Routine endoscopy prior to NSAID therapy or at regular intervals during therapy is neither desirable nor feasible!

### Guidelines for NSAIDs

- Use single agents
- Use lowest effective dose
- Avoid long half life agents in the elderly
- Use H2 Blockers if previous peptic ulcer history
- Use soluble agents if hiatus hernia present

Fig. 5

## ANALGESICS

When pain persists despite full dose anti-inflammatory therapy the addition of simple analgesia on an 'as required' basis may give extra symptomatic relief. Although paracetamol is the analgesic of first choice, many patients find the paracetamol combinations (e.g. Co-proxamol) to be more beneficial. Whilst mild habituation may occur with Co-proxamol and other analgesics such as di-hydrocodeine and Buprenorphine, this may have to be accepted if these agents help to maintain mobility and independence. When patients are already receiving full dose NSAIDs, the addition of aspirin is not recommended due to the increased risk of adverse gastric side effects. For those elderly patients with advanced and essentially burnt out disease, where there is only a minimal inflammatory component, simple analgesia should be prescribed before NSAIDs.

## INTRA-ARTICULAR THERAPY

When disease activity is localised to one or two joints, intra-articular therapy should be considered, as this usually is effective in reducing local synovitis and can be repeated 3-4 times a year when necessary without fear of accelerating joint destruction. Large joints (knees, shoulders, elbows, ankles) usually respond well to such therapy. Triamcinolone acetate (Lederspan) is the agent of choice as the duration of action may exceed several months. Intra-articular injections should not be performed by practitioners who have not received appropriate tuition, particularly as there is a risk of local tissue atrophy if the drug is not injected intra-articularly.

Local injection therapy with hydrocortisone acetate is also valuable in the treatment of tenosynovitis, tendinitis and the carpal tunnel syndrome, and may defer or prevent the need for local surgery.

## SECOND LINE THERAPY

The aim of second line therapy is to induce and maintain a remission in active progressive disease. Whilst there is good evidence that these agents are effective in lessening the indicators of disease activity (ESR, acute-phase reactants) and improving joint stiffness and swelling, the evidence that they are truly disease modifying is still lacking. In view of the potentially serious side effect profile of the majority of these agents, it is recommended that second line therapy is initiated from hospital. Subsequent management and monitoring, however, involves shared care with the patient's practitioner. The assessment of response to second line therapy must not be made by subjective measures alone. Patients are frequently reluctant to admit to increasing disability as they modify their lifestyles as the disease slowly progresses.

Disease activity at the initiation of therapy is assessed by measures of pain (10 cm visual analogue scale), stiffness (duration in minutes of morning stiffness), joint count (Ritchie articular index) and functional capacity (Health Assessment Questionnaire). These measures are repeated at six monthly intervals and provide a more objective assessment of the response or lack of response to therapy. The development and progression of bony erosions as assessed by annual x-rays of hands and feet, provide a good indication of disease progression and also prognosis. The ESR is currently the best laboratory indicator of disease activity, although it is not uncommon for virtually inactive disease to be accompanied by a significantly raised ESR due to other factors (anaemia, fibrinogen and immunoglobulin levels).

Second line therapy is indicated when NSAIDs are ineffective in controlling symptoms in patients who have clinical evidence of widespread synovitis. Other indications are the presence of systemic features and evidence of progressive radiological involvement. Evidence that these agents are effective in advanced end stage disease is lacking.

The commonly prescribed agents are shown in figure 6.

At the initiation of therapy patients are supplied with information leaflets which explain about the delayed onset of action, possible side effects and also the need for regular monitoring of blood tests. General practitioners are also

### Second line therapy

Sulphasalazine  
Penicillamine  
Auranofin  
Myocrisin  
Azathioprine  
Methotrexate

Fig. 6

supplied with information sheets about drug therapy and are asked to participate in shared care by monitoring therapy along the recommended guidelines. In view of potentially serious adverse effects therapy should only be prescribed if these guidelines are adhered to. In patients with uncomplicated disease Salazopyrin is usually the drug of first choice in view of its relative safety and the need for less frequent monitoring. Intramuscular gold (Myocrisin), which is probably the most effective agent, is especially useful when compliance might be a problem. Although oral gold is now available (Auranofin) this is less effective than intramuscular gold. In addition to a similar side effect profile Auranofin can also cause marked diarrhoea necessitating cessation of therapy. Over the past few years Methotrexate has earned a place as an effective agent when given orally once a week. Methotrexate, however, is only considered when other agents have failed, due to its more toxic side effect profile. Close monitoring is required to detect adverse haematological and hepatic side effects, and Methotrexate should not be prescribed coincidentally with NSAIDs.

It remains to be established whether combination therapy has a role in the management of progressive rheumatoid arthritis.

## CORTICOSTEROIDS

Systemic steroids are potent in lessening the activity of synovitis but prolonged usage is associated with a side effect profile that outweighs their benefits in the majority of patients. It is frequently impossible to wean patients off steroids and for this reason short courses of high dose steroids are not recommended. Attempts to control disease activity by alternate day corticosteroid therapy which would improve the side effect profile have generally been unsuccessful due to an exacerbation of symptoms on the "off therapy" day.

There is however a definite role for steroid therapy in the management of some systemic complications and also acute rheumatoid of the elderly.

## SURGICAL PROCEDURES AND JOINT ARTHROPLASTY

The role and importance of orthopaedic surgery in the management of rheumatoid arthritis is beyond the scope of this review. Commonly performed procedures are local synovectomy, excision of ulnar styloid, tendon repair, decompression of carpal tunnel and forefoot arthroplasty. The timing of hip and knee arthroplasties require close liaison between all members of the therapeutic team. The long term benefits of shoulder and elbow arthroplasties have yet to be determined.

## MANAGEMENT OF LATE DISEASE

For those patients who develop serious disability it is essential to involve the occupational therapy and social work departments and other members of the rehabilitation team, so that suitable aids, adaptations and allowances can be provided. If advice about employment or retraining is required, the Disablement Resettlement Officer can provide useful advice.

### SUMMARY

The eventual identification of the cause and cure of this common and disabling disease is awaited with equal enthusiasm by doctors and patients alike. Until such time close co-operation between practitioners and rheumatologists, with the involvement of a multi-disciplinary team, will aim to ensure that well-informed patients achieve maximal functional capacity.

Patient booklets about rheumatoid arthritis and information sheets for patients about drug therapy, exercise and rest, alternative medicine and diets, can be obtained, free of charge, from the Arthritis and Rheumatism Council, 41 Eagle Street, London WC1R 4AR, Tel: 01-495-8572.

## Postgraduate Centre Library Orders

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ABC of Aids. **Alder**  
 Illustrated Handbook of Drug Abuse. **Robin, Michelson**  
 Report on Confidential Enquiries into Maternal Deaths in England and Wales 1982 - 1984  
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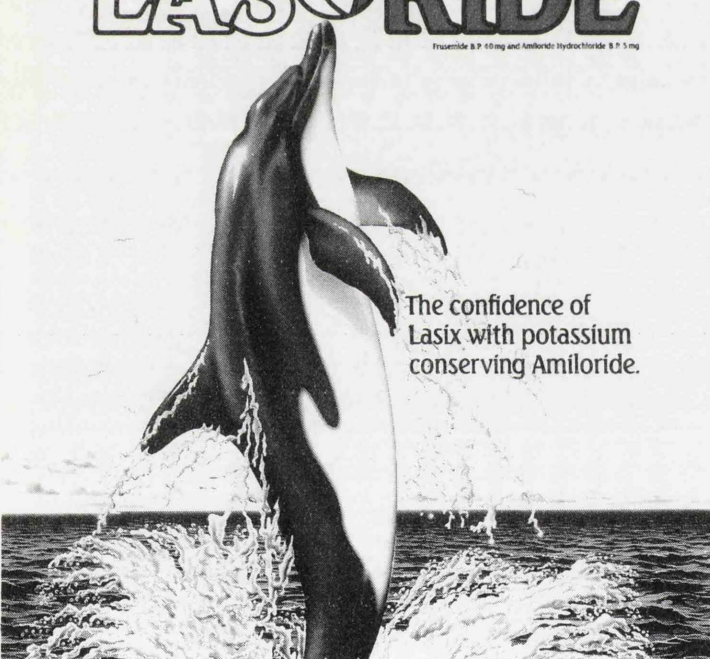
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