

The Clinical Management of Rheumatoid Arthritis and Osteoarthritis: Strategies for Improving Clinical Effectiveness

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Introduction

Ideally clinical practice is evidence-based and patient centred. This report focuses on the major chronic arthropathies seen in primary care practice, namely RA and OA. It was facilitated by the Department of Health as part of its clinical effectiveness programme to improve clinical practice, and is based on discussion at a multidisciplinary workshop. The report reviews evidence-based and effective clinical management for RA and OA, identifies the current gaps between Best Practice and Routine Care and makes recommendations for ways to bridge these gaps. It is hoped that the report will encourage both primary care teams and hospital specialists to improve the quality of the service they provide to patients with RA and OA, and to facilitate greater involvement of patients in all aspects of arthritis care.

The Disease Burden

Musculoskeletal diseases are the commonest cause of work-limiting health problems, long-standing illness and sickness absence in the UK. The medical costs account for nearly 8% of Health Service and related expenditure[1].

Rheumatoid arthritis (RA) is the commonest inflammatory arthropathy, with an incidence of 50 per 100,000 per year² in adults. The prevalence is 500-600 cases per 100,000 (0.5-1.0%)³.

The peak age of onset is in the sixth decade and RA is three times commoner in females. RA in childhood is rare, with an incidence of 5/100,000 per year⁴; the prevalence is also low.

The overall annual inclusive cost of RA in the UK is between £0.8 and £1.3 billion, made up of direct medical costs, work disability costs and residential and nursing home care costs.

Osteoarthritis (OA) is more benign but remains a major cause of disability and medical consultations, especially amongst the elderly. It is commoner in women than men. In a population of 250,000 there will be 500-600 new cases per year, 10-20% of which will need a specialist opinion. In the over 65s, the incidence is 200-250 per 100,000 per year, with OA accounting for more than 2,000 consultations per 10,000 patient years¹. Clinical OA of the hips and knees affects 10-20% of people over 65⁵.

Medical costs are high with those requiring referral costing around £500 per case per year⁶. Joint replacement cost varies between £5,000 and 10,000 depending on the centre⁷. The NHS Executive has calculated annual costs for OA at £320M.

Evidence-based management of RA

RA is chronic, unpredictable and results in persistent joint pain, inflammation, increasing joint damage, frequent extra-articular complications and long-term disability.

Aims: Reduce pain and joint inflammation and alter the course of the disease by decreasing the progression of joint damage.

Prevention: There is increasing evidence for a genetic predisposition to RA, but primary prevention is not possible at present. Early specialist referral, early treatment with anti-rheumatic drugs and access to multidisciplinary hospital-based care can reduce disability of RA, limit joint destruction and improve quality of life when end stage damage has occurred. Tertiary prevention with joint replacement is highly effective in controlling pain and improving function.

Management strategies: Treatment should be tailored to the individual patient. Options include:

- Randomised controlled trials (RCTs) show simple analgesics reduce joint pain .
- RCTs show non-steroidal anti-inflammatory drugs (NSAIDs) reduce pain and tenderness, morning stiffness and inflammation. Minimise use in the elderly. Avoid use in those with high risk of gastro-intestinal (G-I) ulceration or use preventive strategies and consider co-prescribing gastro-protective agents such as H blockers and prostaglandin analogues.
- Local peri-articular and intra-articular steroid injections can decrease the local symptoms of inflammatory synovitis in the short term.
- RCTs and metanalysis of controlled trials show slow-acting anti-rheumatic drugs (gold, methotrexate, sulphasalazine, penicillamine, cyclosporin and anti-malarials hydroxychloroquine and chloroquine) reduce symptoms of inflammatory synovitis e.g. numbers of swollen and tender joints.
- RCTs show some slow-acting anti-rheumatic drugs such as sulphasalazine and cyclosporin decrease joint damage progression.
- High dose systemic steroids improve inflammatory synovitis symptoms and decrease progression of joint damage but side effects are unacceptably high. Low dose systemic steroids may reduce progression of joint damage in early disease and intra-muscular steroids can speed up clinical improvement during initiation of gold therapy or other slow-acting drugs.
- There is weak evidence that educating patients and carers about the disease improves outcome.
- Although they are often valued by the patient, there is only weak evidence that physiotherapy, occupational therapy, use of various aids and appliances and footwear can improve function.
- Non-drug treatments which can maintain and promote function include exercise programmes, provision of splints, mobility and other aids.
- Surgery, including joint replacement can be highly effective in selected cases.
- Extra-articular and systemic complications also need to be managed.

Evidence for these options is summarised in [Table 1](#).

Outcome: Treatment improves symptoms and may reduce progressive damage. Increasing functional disability occurs and many cases have poor eventual outcome. Of those first seen as in-patients, 80% are moderately or severely disabled by 20 years; 30% of out-patients will also develop severe disability. RA reduces life expectancy with a Standardised Mortality Ratio (SMR) of 1.5-3.0; in severe RA mortality equates to that of Hodgkin's disease and triple vessel coronary artery disease.

Evidence-based management of OA

OA is a common, chronic condition characterised by joint failure, probably caused by a variety of different mechanisms.

Aims: Therapy aims to control symptoms (especially pain), minimise disability, reduce progression of joint damage and minimise functional impairment.

Prevention: Avoiding obesity and heavy lifting, and the use of footwear such as trainers may prevent OA. Keeping fit and active, maintaining muscle strength and reducing excess weight may also be effective. Drugs to modify the progression of joint damage are still in development.

Management: A variety of therapies can help control symptoms and improve quality of life:

- RCTs confirm the benefit of providing information about the disease, its management, likely outcomes and how to maintain function and reduce pain.
- Exercise programmes supervised by physiotherapists maintain and improve function.
- Weight loss may improve symptoms.
- Provision of footwear and walking aids, other aids and appliances can increase function and decrease pain.
- RCTs show analgesics reduce joint pain.
- RCTs show that NSAIDs improve joint pain and stiffness. NSAIDs may be given for short periods to overcome acute flares in symptoms. Avoid prolonged use especially in those over 65 or at risk of GI side effects; consider co-prescribing blockers or prostaglandin analogues in those at high risk.
- RCTs show intra-articular and peri-articular steroid injections can reduce local inflammation.
- Local treatment with rubefacients and topical NSAIDs can alleviate pain in some cases.
- Knee and hip joint replacement and other surgical interventions are effective; they can reduce pain, increase mobility and decrease disability even in the very elderly.

These are summarised in [Table 2](#).

Outcome: There is little outcome information. Many patients have a benign self-limiting disease. There is little evidence that OA shortens life, although one recent study suggests generalised OA may reduce life expectancy. OA morbidity may be greater than anticipated.

A model of high quality services for people with arthritis

Both RA and OA are chronic and incurable but respond well to intervention. Increased patient involvement in management through education, self-management programmes and support networks can have a positive effect on outcomes. A team approach with the involvement of service providers and purchasers, support groups, policy makers, patients and carers all working together is best. This should take account of the ageing population, the chronicity of rheumatic disorders and the changing environment for the delivery of healthcare. Care in both RA and OA should be individualised, and provided in a seamless service extending across primary and secondary care.

A framework for delivery of a high quality arthritis service will require:

- a well informed public who can take steps to prevent their own arthritis, access help when it develops, and who can participate in decision-making
- a highly skilled and trained workforce, with good collaboration between primary and secondary care, the ability to work in multidisciplinary teams and to involve patients and carers in decision-making
- knowledge-based decision-making, with testing and evaluation of new and existing therapies, and the incorporation into routine practice of the most effective therapy options
- a responsive service sensitive to the differing needs of different patients with arthritis
- a seamless service working across boundaries, providing long-term, multidisciplinary, shared care.

Strategy for disease management in RA

- Therapy should be planned by specialists and continuing care shared between primary and secondary care.
- Patients and carers should participate in all aspects of treatment programmes
- GPs should work with practice nurses and other healthcare professionals to identify patients with RA, arrange specialist referral to confirm the diagnosis, participate in shared care schemes with the local rheumatology unit and ensure that RA patients receive an annual hospital review.
- Rheumatologists should work with specialist nurses, physiotherapists and occupational therapists. New patients should be seen within 4-6 weeks and a shared care treatment programme recommended. At annual review, rheumatologists should check for extra-articular manifestations and co-morbidity. Orthopaedic surgeons should be involved where appropriate.
- Patients receiving slow-acting anti-rheumatic drugs (SAARDs) require regular monitoring for development of drug toxicity. Monitoring should be shared between rheumatology units and GPs, according to local shared care schemes. Shared care cards should be used to record results and improve communication between teams.

Strategy for disease management in OA

- OA should mainly be treated in primary care by a multidisciplinary team of GPs, physiotherapists and nurses. In refractory cases a hospital consultation may be required.
- Patient education remains the most effective therapy for OA. All those dealing with OA should promote self-care, including advice on lifestyle changes, obesity and keeping fit.
- GPs can prescribe or recommend analgesics and NSAIDs; monitoring is not required to detect side effects, but may be required to assess symptom control. Local steroid injections may be helpful for acute flares.
- Reasons for specialist referral include diagnostic uncertainty, persistent pain or other symptoms, functional decline which can't be treated in primary care, presence of synovial effusion or need for local intra-articular steroids. The rheumatologist should resolve diagnostic or management problems and

recommend a long-term plan in collaboration with the patient and primary care team.

Gaps between Best Practice and Routine Care

Arthritis services are relatively good and in some areas excellent. A recent patient survey identified some shortcomings in service provision; those working in the field agree that significant weaknesses remain:

- Insufficient public knowledge about OA and RA disempowers those with the disease leaving them unable to take part in the decision-making process
- Insufficient knowledge amongst the primary health care team results in some patients with RA being referred late and some with OA being referred unnecessarily.
- Inadequate specialist care due to poor funding may result in incomplete teams unable to offer full range of therapies, and excessive delays in consultation which delays early therapy in RA. Resources are wasted on unnecessary follow up of OA patients.
- Lack of integration between primary and secondary care may result in late or inappropriate referrals, partly due to specialists being paid only for patients they see, with no funding provision for them to train the primary care team nor to spend time developing management plans and protocols.
- Lack of knowledge about new treatments is due to insufficient large RCTs.

An action plan for bridging the gap

A commitment to continuing education for all those involved is the foundation for bridging the gap. This must be undertaken at several levels concurrently.

- Public education - encourage people to maintain good health and fitness and to see their GP if they develop joint pain; provide information about arthritis.
- Patient education - all those involved must educate patients about arthritis and treatment options
- Primary Health Care Team education - a long-term education programme, supported by guidelines and protocols, to educate and motivate teams; on-line services provided by specialists would be useful. Concentrate on differing management needs of OA and RA.
- Refocus specialist services - long-term commitment to an adequately resourced quality arthritis service including out-patient-based multidisciplinary specialist advice and support, with access to in-patient facilities. Rheumatologists have responsibilities for setting and maintaining standards, for representing patient needs to purchasers and providers, for providing education to patients and for ensuring those providing therapy stay up to date. They are also responsible for their own continuing education.
- Define effective care - ongoing evidence-based reviews should define most effective treatments; RCTs should be set up to answer clinical questions; workshops and publications can help ensure provision of care meets patient needs in the most cost effective way.
- Link primary and secondary care - alter funding patterns to encourage communication; develop local protocols from national guidelines, including algorithms for treatment and referral of OA and RA; fund rheumatologists and

specialist GPs to design and deliver such education; GPs and specialists should collaborate on treatment.

Conclusion

Arthritis is a debilitating disease; OA and RA affect the lives of millions in the UK. All those involved should commit to providing high quality care. Treatment should be symptomatic and individualised, with different plans for OA and RA. With education and support, OA should be managed in primary care, freeing specialists to take responsibility for RA in a shared care setting with the primary care team. There must be increased communication between primary and secondary care. Patients and carers must be educated and involved in treatment planning.

Effective clinical management of OA and RA should be part of a strategy for minimising the impact of these painful and costly diseases on the individual with the disease, the community and the NHS.

Tables

Table 1. The strength of the evidence for effective management in rheumatoid arthritis

Area	Good Evidence	Weak Evidence	Insufficient Evidence
Analgesics		*	
Non-steroidal anti-inflammatory drugs	*		
Slow-acting anti-rheumatic drugs to control symptoms	*		
Slow-acting anti-rheumatic drugs to halt progression		*	
Combination of slow-acting anti-rheumatic drugs		*	
Early use of slow-acting anti-rheumatic drugs		*	
Steroids to control symptoms	*		
Steroids to halt progression		*	
Local steroid injections	*		
Education and advice		*	
Physiotherapy		*	
Occupational therapy		*	
Footwear			*
Aids and appliances			*
Surgical joint replacement	*		

Table 2. The strength of the evidence for effective management in osteoarthritis.

Area	Good Evidence	Weak Evidence	Insufficient Evidence
Education and advice		*	
Physiotherapy		*	
Weight loss			*
Occupational therapy		*	
Footwear		*	
Aids and appliances		*	
Surgical joint replacement	*		
Analgesics	*		
NSAIDs		*	
Local steroid injections	*		
Local NSAIDs and rubifacients			*

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