The ABC series contains a wealth of indispensable resources for GPs, GP registrars, junior doctors, doctors in training and all those in primary care

- Now fully revised and updated
- Highly illustrated, informative and practical source of knowledge
- An easy-to-use resource, covering the symptoms, investigations, treatment and management of conditions presenting in your day-to-day practice and patient support
- Full colour photographs and illustrations aid diagnosis and patient understanding of a condition

For more information on all books in the ABC series, including links to further information, references and links to the latest official guidelines, please visit:

www.abcbbookseries.com
ABC of Rheumatology

Fourth edition

EDITED BY

Ade Adebajo

Associate Director of Teaching
University of Sheffield Medical School
Honorary Senior Lecturer and Consultant Rheumatologist/
Director of Undergraduate Medical Education
Academic Rheumatology Group
Faculty of Medicine, University of Sheffield and Barnsley Hospital
South Yorkshire, UK
Contents

Contributors, vii
Preface, xi
List of Abbreviations, xii

1 Community Rheumatology: Delivering Care Across Boundaries, 1
   Elaine M Hay, Jackie Hill and Ade Adebajo

2 Pain in the Wrist and Hand, 5
   Michael Shipley and Elspeth Wise

3 Pain in the Neck, Shoulder and Arm, 12
   Rachelle Buchbinder and Caroline Mitchell

4 Low Back Pain, 21
   Rajiv K Dixit and D John Dickson

5 Pain in the Hip, 28
   Andrew J Hamer and Jeffrey N Katz

6 Pain in the Knee, 32
   Adrian Dunbar and Mark Wilkinson

7 Pain in the Foot, 38
   James Woodburn and Philip S Helliwell

8 Fibromyalgia Syndrome, 47
   Sarah Ryan and Anita Campbell

9 Osteoarthritis, 51
   Virginia Byers Kraus and Michael Doherty

10 Gout, Hyperuricaemia and Crystal Arthritis, 59
   Martin Underwood and Ade Adebajo

11 Osteoporosis, 65
   Eugene McCloskey, Nicola Peel and Richard Eastell

12 Rheumatoid Arthritis: Clinical Features and Diagnosis, 71
   Kamran Hameed and Mohammed Akil

13 Treatment of Rheumatoid Arthritis, 76
   Edwin S L Chan, Anthony G Wilson and Bruce N Cronstein

14 Spondyloarthritides, 79
   Andrew Keat and Robert Inman
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Juvenile Idiopathic Arthritis</td>
<td>Taunton R Southwood and Ilona S Szer</td>
</tr>
<tr>
<td>16</td>
<td>Musculoskeletal Disorders in Children and Adolescents</td>
<td>Helen Foster and Lori Tucker</td>
</tr>
<tr>
<td>17</td>
<td>Polymyalgia Rheumatica and Giant Cell Arteritis</td>
<td>Eric L Matteson and Howard A Bird</td>
</tr>
<tr>
<td>18</td>
<td>Systemic Lupus Erythematous and Lupus-like Syndromes</td>
<td>Caroline Gordon and Rosalind Ramsey-Goldman</td>
</tr>
<tr>
<td>19</td>
<td>Raynaud’s Phenomenon and Scleroderma</td>
<td>Christopher P Denton and Carol M Black</td>
</tr>
<tr>
<td>20</td>
<td>Reflex Sympathetic Dystrophy</td>
<td>Chris Deighton and Paul Davis</td>
</tr>
<tr>
<td>21</td>
<td>Is it a Connective Tissue Disease?</td>
<td>Peter J Maddison and Mohammed Tikly</td>
</tr>
<tr>
<td>22</td>
<td>Sports and Exercise Medicine</td>
<td>Cathy Speed</td>
</tr>
<tr>
<td>23</td>
<td>Vasculitis and Related Rashes</td>
<td>Richard A Watts and David G I Scott</td>
</tr>
<tr>
<td>24</td>
<td>Laboratory Tests</td>
<td>Cynthia Aranow, Margaret J Larché and David A Isenberg</td>
</tr>
<tr>
<td>25</td>
<td>The Team Approach</td>
<td>Janet Cushnaghan, Elaine M Hay and Louise Warburton</td>
</tr>
<tr>
<td>26</td>
<td>Epidemiology of Rheumatic Diseases</td>
<td>Alan Silman and Jacqueline Oliver</td>
</tr>
<tr>
<td></td>
<td>Index</td>
<td></td>
</tr>
</tbody>
</table>
Contributors

Ade Adebajo
Associate Director of Teaching
University of Sheffield Medical School
Honorary Senior Lecturer and Consultant Rheumatologist/
Director of Undergraduate Medical Education
Academic Rheumatology Group
Faculty of Medicine, University of Sheffield and Barnsley Hospital
South Yorkshire, UK

Mohammed Akil
Consultant Rheumatologist
Royal Hallamshire Hospital
Sheffield, UK

Cynthia Aranow
Associate Investigator
Feinstein Institute for Medical Research
Manhasset, NY, USA

Howard A Bird
Professor
Chapel Allerton Hospital
Leeds, UK

Carol M Black
Professor and Centre Director
Centre for Rheumatology
Royal Free Hospital
London, UK

Rachelle Buchbinder
Professor/Consultant Rheumatologist
Monash Department of Clinical Epidemiology
 Cabrini Hospital School of Public Health and Preventative Medicine
Monash University
Melbourne, Australia

Anita Campbell
General Practitioner
Richmond Medical Centre
Sheffield, UK

Edwin S L Chan
Assistant Professor of Medicine
Department of Medicine
New York University School of Medicine
New York, NY, USA

Bruce N Cronstein
Paul R Eserman Professor of Medicine
Director, Clinical and Translational Science Institute
New York University School of Medicine
New York, NY, USA

Janet Cushnaghan
Research Fellow MRC ERC
Southampton General Hospital
Southampton, UK

Paul Davis
Professor of Medicine
University of Alberta
Edmonton, AB, Canada

Chris Deighton
Consultant Rheumatologist
Derbyshire Royal Infirmary
Derby, UK

Christopher P Denton
Professor of Experimental Rheumatology
Centre for Rheumatology
Royal Free Hospital
London, UK

D John Dickson
Community Specialist in Primary Care Rheumatology
Redcar & Cleveland Primary Care Trust
Redcar, UK
Contributors

Rajiv K Dixit
Associate Clinical Professor of Medicine
University of California
San Francisco, CA, USA
Director
Northern California Arthritis Center
Walnut Creek, CA, USA

Michael Doherty
Professor of Rheumatology
University of Nottingham
Department of Academic Rheumatology
Nottingham City Hospital
Nottingham, UK

Adrian Dunbar
General Practitioner with Special Interest in Musculoskeletal Medicine and Chronic Pain Management
Skipton, UK

Richard Eastell
Professor
Division of Clinical Sciences
Northern General Hospital
Sheffield, UK

Helen Foster
Professor of Paediatric Rheumatology
Newcastle University
Newcastle upon Tyne, UK

Caroline Gordon
Professor of Rheumatology
Division of Immunity and Infection
The Medical School
University of Birmingham
Birmingham, UK

Kamran Hameed
Associate Professor
Consultant Rheumatologist
Agakhan University Hospital
Karachi, Pakistan

Andrew J Hamer
Consultant Orthopaedic Surgeon
Northern General Hospital
Sheffield, UK

Elaine M Hay
Professor and Honorary Consultant in Community Rheumatology
Staffordshire Rheumatology Centre
The Haywood
Stoke-on-Trent, UK

Philip S Helliwell
Senior Lecturer in Rheumatology
Academic Unit of Musculoskeletal Disease
University of Leeds
Leeds, UK

Jackie Hill
Arthritis Research Campaign Senior Lecturer in Rheumatology Nursing & Co-Director Academic and Clinical Unit for Musculoskeletal Nursing (ACUMeN) University of Leeds
Chapel Allerton Hospital
Leeds, UK

Robert Inman
Toronto Hospital Western Division
Toronto, ON, Canada

David A Isenberg
Professor of Rheumatology
University College Hospital
London, UK

Jeffrey N Katz
Case Western Reserve University
Cleveland, OH, USA

Andrew Keat
Arthritis Centre
Northwick Park Hospital
Harrow, UK

Virginia Byers Kraus
Associate Professor Medicine
Duke University Medical Center
Durham, NC, USA

Margaret J Larché
McMaster University
Hamilton, ON, Canada

Peter J Maddison
Consultant Rheumatologist
North West Wales NHS Trust
Professor of Musculoskeletal Medicine
School of Medical Sciences
Bangor University
Bangor, UK

Eric L Matteson
Mayo Clinic
Rochester, MN, USA
Contributors

Eugene McCloskey
Reader in Adult Bone Disease
Academic Unit of Bone Metabolism and WHO Collaborating Centre for Metabolic Bone Diseases
University of Sheffield
Sheffield, UK

Caroline Mitchell
Senior Clinical Lecturer General Practitioner
Academic Unit of Primary Medical Care
University of Sheffield
Sheffield, UK

Jacqueline Oliver
Research Associate
Arthritis Research Campaign
Chesterfield, UK

Nicola Peel
Northern General Hospital
Sheffield, UK

Rosalind Ramsey-Goldman
Solovy Arthritis Research Society Research Professor of Medicine
Northwestern University Feinberg School of Medicine
Chicago, IL, USA

Sarah Ryan
Nurse Consultant in Rheumatology
Haywood Hospital
Stoke-on-Trent Community Health Service
Stoke-on-Trent, UK

David G I Scott
Consultant Rheumatologist
Norfolk and Norwich University Hospital NHS Trust
Honorary Professor
University of East Anglia
Norwich, UK

Michael Shipley
University College London Hospitals
The Middlesex Hospital
London, UK

Alan Silman
Medical Director
Arthritis Research Campaign
Chesterfield, UK

Taunton R Southwood
Professor of Paediatric Rheumatology
University of Birmingham, Birmingham
Birmingham Children's Hospital
NHS Foundation Trust
Birmingham, UK

Cathy Speed
Honorary Consultant
Rheumatology and Sports Medicine
Cambridge University Hospital
Cambridge, UK

Ilona S Szer
Director, Pediatric Rheumatology
Rady Children’s Hospital and Health Center
San Diego, CA, USA

Mohammed Tikly
Professor of Rheumatology
Chris Hani Baragwanath Hospital
University of the Witwatersrand
Johannesburg, South Africa

Lori Tucker
Division of Pediatric Rheumatology
British Columbia’s Children’s Hospital
Vancouver, BC, Canada

Martin Underwood
Professor of Primary Care Research
Warwick Medical School
University of Warwick
Coventry, UK

Louise Warburton
Shawbirch Medical Practice
Shawbirch
Telford, UK

Richard A Watts
Consultant Rheumatologist
Clinical Senior Lecturer University of East Anglia, Norwich
Ipswich Hospital NHS Trust
Ipswich, UK

Mark Wilkinson
Clinical Senior Lecturer, Orthopaedics
Academic Unit of Bone Metabolism
University of Sheffield
Northern General Hospital
Sheffield, UK
Anthony G Wilson
Professor of Rheumatology
University of Sheffield
Sheffield, UK

Elspeth Wise
General Practitioner
Belmont Surgery
Durham, UK

James Woodburn
Professor of Rehabilitation
Glasgow Caledonian University
Glasgow, UK
The fourth edition of the ABC of Rheumatology marks a change in Editor. I would like to thank my predecessor Mike Snaith for his sterling work in producing such excellent previous editions of this book which has led to its worldwide recognition and appeal. The fact that the book is now in its fourth edition is testimony to the great foundation that he laid.

I have kept the tradition as well as enriched the strengths of previous editions to ensure that this book continues to provide a good and up to date foundational knowledge of Rheumatology and Musculoskeletal Medicine for a wide spectrum of those interested in this field. This ranges from family doctors, medical students, nurse specialists, allied health professionals to doctors in training and others besides.

I would like to thank all those who have contributed to this current edition including my colleagues, not only in Sheffield but also across the United Kingdom and indeed other parts of the world. I am particularly pleased to have so many authors from North America where this book is increasingly being used.

Finally, I wish to thank the publishers for their dedication and professionalism.

Ade Adebajo
### List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE</td>
<td>angiotensin-converting enzyme</td>
</tr>
<tr>
<td>AHPS</td>
<td>allied health professionals</td>
</tr>
<tr>
<td>ANA</td>
<td>antinuclear antibody</td>
</tr>
<tr>
<td>ANCA</td>
<td>anti-neutrophil cytoplasmic antibodies</td>
</tr>
<tr>
<td>APLA</td>
<td>antiphospholipid antibody</td>
</tr>
<tr>
<td>APLS</td>
<td>antiphospholipid antibody syndrome</td>
</tr>
<tr>
<td>arc</td>
<td>The Arthritis Research Campaign</td>
</tr>
<tr>
<td>ARMA</td>
<td>Arthritis and Musculoskeletal Alliance</td>
</tr>
<tr>
<td>AS</td>
<td>ankylosing spondylitis</td>
</tr>
<tr>
<td>BMD</td>
<td>bone mineral density</td>
</tr>
<tr>
<td>BMI</td>
<td>body mass index</td>
</tr>
<tr>
<td>BSR</td>
<td>British Society for Rheumatology</td>
</tr>
<tr>
<td>CATS</td>
<td>clinical assessment and treatment services</td>
</tr>
<tr>
<td>CHB</td>
<td>congenital heart block</td>
</tr>
<tr>
<td>CMCJ</td>
<td>carpometacarpal joint</td>
</tr>
<tr>
<td>CRP</td>
<td>C-reactive protein</td>
</tr>
<tr>
<td>CTGF</td>
<td>connective tissue growth factor</td>
</tr>
<tr>
<td>CWP</td>
<td>chronic widespread pain</td>
</tr>
<tr>
<td>DIPJ</td>
<td>distal interphalangeal joint</td>
</tr>
<tr>
<td>DMARDs</td>
<td>disease-modifying antirheumatic drugs</td>
</tr>
<tr>
<td>DMS</td>
<td>dermatomyositis</td>
</tr>
<tr>
<td>DRUJ</td>
<td>distal radio-ulnar joint</td>
</tr>
<tr>
<td>DXA</td>
<td>dual X-ray absorptiometry</td>
</tr>
<tr>
<td>ELISA</td>
<td>enzyme-linked immunosorbent assay</td>
</tr>
<tr>
<td>ERA</td>
<td>enthesis-related arthritis</td>
</tr>
<tr>
<td>ESP</td>
<td>extended-scope physiotherapist</td>
</tr>
<tr>
<td>ESR</td>
<td>erythrocyte sedimentation rate</td>
</tr>
<tr>
<td>ESWT</td>
<td>extracorporeal shock wave therapy</td>
</tr>
<tr>
<td>GCA</td>
<td>giant cell arteritis</td>
</tr>
<tr>
<td>GI</td>
<td>gastrointestinal</td>
</tr>
<tr>
<td>GP</td>
<td>general practitioner</td>
</tr>
<tr>
<td>GPsSI</td>
<td>GP with special interest</td>
</tr>
<tr>
<td>GU</td>
<td>genito-urinary</td>
</tr>
<tr>
<td>HRCT</td>
<td>high-resolution computed tomography</td>
</tr>
<tr>
<td>HSP</td>
<td>Henoch–Schönlein purpura</td>
</tr>
<tr>
<td>IBD</td>
<td>inflammatory bowel disease</td>
</tr>
<tr>
<td>ICP</td>
<td>integrated-care pathway</td>
</tr>
<tr>
<td>IL-1</td>
<td>interleukin-1 etc.</td>
</tr>
<tr>
<td>IPJ</td>
<td>interphalangeal joint</td>
</tr>
<tr>
<td>JDM</td>
<td>juvenile dermatomyositis</td>
</tr>
<tr>
<td>JIA</td>
<td>juvenile idiopathic arthritis</td>
</tr>
<tr>
<td>JCA</td>
<td>juvenile chronic arthritis</td>
</tr>
<tr>
<td>JRA</td>
<td>juvenile rheumatoid arthritis</td>
</tr>
<tr>
<td>KD</td>
<td>Kawasaki disease</td>
</tr>
<tr>
<td>LBP</td>
<td>low back pain</td>
</tr>
<tr>
<td>MCPJ</td>
<td>metacarpophalangeal joint</td>
</tr>
<tr>
<td>MCTD</td>
<td>mixed connective tissue disease</td>
</tr>
<tr>
<td>MDT</td>
<td>multidisciplinary team</td>
</tr>
<tr>
<td>MMP-3</td>
<td>matrix metalloproteinase-3</td>
</tr>
<tr>
<td>MPO</td>
<td>myeloperoxidase</td>
</tr>
<tr>
<td>MRI</td>
<td>magnetic resonance imaging</td>
</tr>
<tr>
<td>NICE</td>
<td>National Institute for Health and Clinical Excellence</td>
</tr>
<tr>
<td>NOGG</td>
<td>National Osteoporosis Guideline Group</td>
</tr>
<tr>
<td>NSAID</td>
<td>non-steroidal anti-inflammatory drug</td>
</tr>
<tr>
<td>OA</td>
<td>osteoarthritis</td>
</tr>
<tr>
<td>PAH</td>
<td>pulmonary arterial hypertension</td>
</tr>
<tr>
<td>PIPJ</td>
<td>proximal interphalangeal joint</td>
</tr>
<tr>
<td>PMR</td>
<td>polymyalgia rheumatica</td>
</tr>
<tr>
<td>PsA</td>
<td>psoriatic arthritis</td>
</tr>
<tr>
<td>RA</td>
<td>rheumatoid arthritis</td>
</tr>
<tr>
<td>ReA</td>
<td>reactive arthritis</td>
</tr>
<tr>
<td>RVSP</td>
<td>right ventricular systolic pressure</td>
</tr>
<tr>
<td>SAA</td>
<td>serum amyloid A</td>
</tr>
<tr>
<td>SCLE</td>
<td>subacute cutaneous lupus erythematosus</td>
</tr>
<tr>
<td>SLE</td>
<td>systemic lupus erythematosus</td>
</tr>
<tr>
<td>SpA</td>
<td>spondyloarthritides</td>
</tr>
<tr>
<td>SRC</td>
<td>scleroderma renal crisis</td>
</tr>
<tr>
<td>SSc</td>
<td>systemic sclerosis</td>
</tr>
<tr>
<td>ST</td>
<td>spinal stenosis</td>
</tr>
<tr>
<td>TGF</td>
<td>transforming growth factor</td>
</tr>
<tr>
<td>TNF</td>
<td>tumour necrosis factor</td>
</tr>
</tbody>
</table>
CHAPTER 1

Community Rheumatology: Delivering Care Across Boundaries

Elaine M Hay1, Jackie Hill2 and Ade Adebajo3

1Staffordshire Rheumatology Centre, Stoke-on-Trent, UK
2University of Leeds, Leeds, UK
3University of Sheffield, Sheffield, UK

The ever-increasing demand upon the acute hospitals to deliver emergency medicine, together with technological (but time-consuming and expensive) advances means that in the UK and elsewhere follow-up of many chronic conditions has been squeezed out of the acute setting and, by default, delegated to primary care. Unfortunately this shift in activity has not always been mirrored by an appropriate shift in resources and skills. This chapter discusses new ways of working to try to ensure that patients with musculoskeletal conditions receive timely, appropriate treatments within the limitations imposed by restricted resources.

Shared care—how to make it work

With hospital services running at full (or over) capacity, one way forwards is to develop models of shared care appropriate to local need, responsive to local demands and in the patients’ best interests. Simply transferring the workload from rheumatologists to general practitioners (GPs) will not work—primary care is also bursting at the seams. One way of transferring rheumatological expertise to the community, without increasing the burden on the primary care team, is to develop the roles of health professionals such as nurses, physiotherapists and occupational therapists. Such practitioners, working in an extended role, operate at a high level of clinical practice and cross traditional professional boundaries. Their expertise includes assessment (of the disease and psychosocial factors), follow-up and management of patients with musculoskeletal conditions and inflammatory arthritis. Their roles and responsibilities have recently been defined (Carr, 2001).

What is the role of the specialist nurse?

Specialist nurses are highly skilled and provide holistic care for patients and their significant others by addressing their physical, psychological and social needs. They can play a pivotal role in the management of people with musculoskeletal conditions, acting as effective communicators between the patient, their GP and hospital consultant. Like GPs, they tend to stay in post for many years and become a “constant presence” in the patient’s illness journey, thus ensuring the continuity of care that those with a chronic disease value so highly. The role of the specialist nurse is essentially to provide care management, education and support for patients and their families, and to act as an educator and resource for other health professionals. The role includes those activities shown in Box 1.1. Some nurse specialists also undertake advanced practices such as intra-articular injections (Meadows and Sheehan, 2005). This can be particularly useful to GPs, who may be inexperienced in this procedure. After specialist training these nurses can also prescribe drug therapy (Carr, 2001). Of all these activities, patient education remains one of the priorities of the specialist nurse (Department of Health, 2006).

Why educate patients?

Patient education enables people with complex chronic diseases to care for themselves, bringing benefits for everyone. Supporting
patients to self care has been shown to reduce their GP visits by 40–69% (Schillinger et al., 2003). Patient education is not a treatment in itself but a treatment enhancer, magnifying the effects of standard treatments by persuading patients to adhere to them more closely, or to adopt actions that are believed to be beneficial. To do this, patients must be active collaborators in their care and believe in their ability to perform a specific task or achieve a certain objective. This is known as “self-efficacy”. For changes to occur patients must acquire knowledge and skills, and so patient education involves the multidisciplinary team and the patient and their partner/carer in both primary and secondary care. Every consultation is an opportunity to educate and provide information. In order to care for themselves, patients will need to know about the topics shown in Box 1.2.

Patients should be given both verbal and written explanations. The Arthritis Research Campaign (arc), Arthritis Care, and the National Rheumatoid Arthritis Society are good reliable sources of the latter.

Skill enhancement can be gained from attendance at an Expert Patients Programme, and giving the patient the address of local and national community support networks offers great benefits.

It is important to remember that simply because information has been provided does not mean that it has been understood or acted upon. One quick and easy method to ensure assimilation is the “teach me back” method (Schillinger et al., 2003), which involves the patient being asked to “teach me” or “show me” as if the professional does not understand the problem. This quickly identifies any misunderstandings and allows purposeful correction.

**Who should be referred to secondary care?**

Waiting times for new rheumatology appointments vary widely and depend on local resources but also, to some extent, on how clinicians triage referrals from GPs. To make the system work effectively, care pathways need to be developed in which the patient is a partner, and which take psychosocial as well as biomechanical factors into consideration. The outcome, in terms of whether the patient is given an appropriate priority with an appropriate healthcare professional, depends largely upon the information contained within the referral letter. Standardized referral forms may help but have the disadvantages that they are time-consuming to complete and rather impersonal. Helpful information to include in a referral letter is shown in Box 1.3.

It has been estimated that 15–30% of all GP consultations are for musculoskeletal conditions. Most of these are for osteoarthritis in the over 50s age group and back pain in the under 50s. One challenge for the GP is how to spot the small number of patients with early inflammatory arthritis among this caseload who will benefit from early referral to hospital and prompt treatment with DMARDs. There are no specific clinical, radiological or immunological markers for rheumatoid arthritis (RA). Normal blood test results and X-rays do not exclude RA, but equally a positive rheumatoid factor does not clinch the diagnosis. Most rheumatology departments encourage an “inclusive approach” to referral and encourage GPs to maintain a high index of suspicion and not delay patients with possible inflammatory arthritis. Ideally, patients suspected of having inflammatory problems will be fast-tracked to secondary care. Box 1.4 highlights certain features thought to be indicative of early RA.

---

**Box 1.1 Role of the specialist nurse**

- Supervise treatment safety—e.g. monitoring disease-modifying antirheumatic drugs (DMARDs)
- Review treatment effectiveness
- Coordinate the multidisciplinary team
- Provide a communication channel between the patient and the team
- Act as the patient’s advocate
- Promote continuity of care
- Identify and address psychosocial patients’ issues
- Man telephone advice lines
- Facilitate education for patients, carers and health professionals

**Box 1.2 Knowledge necessary for self care**

- Disease aetiology and progress
- Drugs and how to take them; what the side effects are and what to do if they occur
- How to exercise
- How to protect joints and acquire appropriate devices and home changes
- How to control pain
- Coping strategies

**Box 1.3 Important information to include in a rheumatology referral letter**

- Length of history
- Pattern of joint involvement
- Presence of joint swelling
- Presence of early morning stiffness
- Previous treatments and response
- Level of distress/disability
- Results of investigations
- Other relevant medical or psychosocial factors

**Box 1.4 Symptoms and signs suggestive of early inflammatory arthritis**

- Symmetrical soft-tissue swelling (synovitis) of wrists and/or metacarpophalangeal joints and/or proximal interphalangeal joints
- Joint stiffness a significant problem—especially in the early mornings for >30 minutes
- Soft-tissue swelling of any joints
- Good response to a trial of non-steroidal anti-inflammatory drugs
Primary care management of musculoskeletal problems

Clearly, the majority of patients presenting to GPs will not have inflammatory arthritis. Indeed, often a precise pathological diagnosis based on symptoms and signs and results of investigations will not be possible, and may not be the most appropriate approach to management. This “medical model” of care often fails to address other important influences on pain perception, such as emotional and behavioural factors, and may encourage chronicity by using terms such as “arthritis”, “wear and tear” or “degeneration”, which emphasise the unchanging nature of the condition. Doctors are trained to diagnose “disease”, whereas the patient’s concern is what to do about their musculoskeletal pain, not just what to call it.

An alternative approach, which may be more useful in primary care, limits the diagnostic process to identifying potentially serious pathology—the so-called “red flag” disorders—and other specific diseases or disorders. This system was initially developed for back pain, and has been effective in changing the primary care management of this condition. It is equally applicable to other widespread or regional pain disorders, however (Box 1.5) (reviewed in Carr, 2001). Patients with “red flags” and certain other patients with specific diagnoses, including inflammatory arthropathies and connective-tissue disorders, should be considered for referral to secondary care for further investigation and management.

Having excluded and dealt with the small proportion of patients with potential serious pathology and specific diagnoses, the next step is to decide how best to manage the remainder. Two areas need to be addressed: how to deal with the presenting pain and distress (discussed below), and how to prevent future disability. Guidelines for the management of low back pain highlight the importance of identifying factors that predict chronicity. It is important to give positive messages about likely recovery and lack of long-term harm, taking particular account of psychosocial barriers to recovery (“yellow flags”). These principles have been described elsewhere (Department of Health, 2007) and are summarized in Box 1.6.

Evidence-based primary care treatments for musculoskeletal problems

The shift in emphasis towards self-management of musculoskeletal problems means that the primary health-care team is of central importance. There is a growing evidence base supporting the effectiveness of a number of simple primary care interventions for musculoskeletal problems (reviewed in Schillinger et al., 2003). Direct access physiotherapy reduces wait times and costs for treatment and is one way to facilitate the use of exercise and self-management regimes. These have been demonstrated to be beneficial for patients with a variety of regional and widespread musculoskeletal conditions, including osteoarthritis, back pain, fibromyalgia and shoulder problems. Prescribed exercise need not be the province of the physiotherapist alone. Often, wait times to see a physiotherapist are excessively long, and many self-limiting musculoskeletal conditions can be managed with sensible exercise regimes undertaken outside the hospital setting. This has the advantage of promoting self-help and “demedicalizing” common musculoskeletal problems. arc publishes a wide range of patient information leaflets and booklets, which are useful adjuncts to advice and education provided by health-care professionals (Box 1.7).

Local steroid injections are effective for reducing pain from soft-tissue problems such as tennis elbow and shoulder problems in the short term but do not improve long-term outcome. They should be reserved for patients in whom pain is restricting rehabilitation.

Box 1.5 “Red flags” for regional pain syndromes

<table>
<thead>
<tr>
<th>History of significant trauma</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fracture</td>
</tr>
<tr>
<td>• Major soft-tissue injury</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Localized joint swelling and/or redness</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Septic arthritis</td>
</tr>
<tr>
<td>• Inflammatory arthritis</td>
</tr>
<tr>
<td>• Haemarthrosis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unremitting night pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Malignancy</td>
</tr>
<tr>
<td>• Inflammation/infection</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bone tenderness</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fracture</td>
</tr>
<tr>
<td>• Malignancy</td>
</tr>
<tr>
<td>• Infection</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Systemic disturbance</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Significant co-morbidity</th>
</tr>
</thead>
</table>

---

Box 1.6 Psychosocial factors that predict chronicity

- Belief that pain is due to progressive pathology
- Belief that pain represents harm or injury
- Belief that avoiding activity will speed up recovery
- Tendency to social isolation
- Tendency to anxiety/depression
- Expectation that passive treatments rather than self-help programmes will be of benefit

Box 1.7 arc publications

Arthritis Research Campaign (arc) leaflets, booklets and other publications are available from:

Dept RD  
arc Trading Ltd  
Brunel Drive  
Northern Road Industrial Estate  
Newark  
Notts. NG24 2DE  
www.arc.org.uk
with the measures discussed above. Although the risks from local steroid injections are minimal, certain precautions need to be adhered to (Box 1.8).

Non-steroidal anti-inflammatory drugs may be beneficial for the short-term treatment of osteoarthritis but have a worrying side-effect profile in the patient group most likely to be prescribed them (elderly females). Simple analgesics are the preferred option where possible.

**Global issues**

The issues discussed in this chapter have global application, as the burden of illness from musculoskeletal conditions is high in both the developed world and developing countries alike, particularly with an ever-increasing elderly population worldwide. In developing countries, it is essential to involve local community leaders and community health workers in the management of patients with these conditions. Awareness of the importance of musculoskeletal conditions, in terms of morbidity but also mortality, needs to be raised among all health-care workers, governments and members of the public. With increasing travel and migration, knowledge of the global spectrum of musculoskeletal conditions is important. There also needs to be an increasing emphasis on prevention through encouraging healthy lifestyles and joint protection and by tackling modifiable risk factors such as falls prevention. Whether in primary or secondary care, or whether in a developing or developed country, what is key is not where musculoskeletal care takes place, but that it is appropriately given.

**Conclusion**

Over the last 10 years there has been a shift in thinking about how best to care for patients with rheumatological disorders (Box 1.9). For those with inflammatory arthritis the emphasis is on prompt referral to secondary care so that treatment with potentially disease-modifying agents can be instituted early, before irreversible joint damage has occurred. For patients with non-inflammatory conditions, such as osteoarthritis and regional or widespread musculoskeletal pain, optimal management depends on developing an efficient triage system that can identify those with “red flags” who will benefit from referral to secondary care for further investigation and management. The first-line management for the remainder should be by health-care professionals in primary care, using the strategies outlined above.

**References**


Schillinger D, Piette J, Grumbach K et al. Closing the loop: physician communication with diabetic patients who have low health literacy. *Archives of Internal Medicine* 2003; 163: 83–90.


**Further reading**


White C, Cooper RG. In Practice: Prescribing and Monitoring of Disease-Modifying Anti-Rheumatic Drugs (DMARDs) for Inflammatory Arthritis. Arthritis Research Campaign, Chesterfield, 2005.