

6. ARTHRITIS, RHEUMATISM, MUSCULO-SKELETAL AND RHEUMATOLOGICAL DISORDERS

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6.2 Introduction

6.2.1 Arthritis and the rheumatic conditions constitute the major cause of chronic disability in the United Kingdom. They affect 10 million people including 1.2 million under 45 and 30,000 children.

6.2.2 **Arthritis** means inflammation in one or more joints. Movement in the joint is restricted with pain and swelling. The most common types are **osteoarthritis** (also known as **osteoarthrosis**) and **rheumatoid arthritis**. **Ankylosing spondylitis** and **juvenile chronic arthritis (Stills disease)** are other types of arthritis. Arthritis may also be found in other disorders (eg psoriasis, colitis, some infections and gout).

6.2.3 The **musculoskeletal** system refers to the bones of the body, the joints which link them, and the related structures such as tendons, ligaments and muscles. Musculo-skeletal disorders are therefore all those medical conditions which involve these parts of the body.

6.2.4 **Rheumatism** is a term often used to describe the great number of disorders

which affect the musculo-skeletal system. Furthermore a number of other terms are used to describe joint/muscle disorders eg "**frozen shoulder**", "**tennis elbow**", **fibrositis (fibromyalgia)** and **polymyalgia rheumatica**. Sometimes when only the ligaments, tendons and muscles are the sources of pain and limited function the term **soft-tissue rheumatism** is used.

6.2.5 Joint hypermobility, which is a hereditary (ie inherited) condition causing looseness and fragility of ligaments and other tissues surrounding the joints, renders the affected person more susceptible to injury. The resultant "**hypermobility syndrome**" causes problems (strains, sprains, dislocations, fractures or just pain) at various sites of injury, which may, in some cases, be persistent and lead to difficulties with mobility and self-care depending on the parts affected.

6.2.6 The diagnosis is of secondary importance - it is the disability and its consequent needs which are relevant. In all of these conditions there is a great degree of variability in relation to the need for help or effects on walking. To some extent this is dependent on the specific condition, age, severity, treatment and the response of the individual to treatment.

6.2.7 It is highly unlikely that the joints of people past middle age will be as supple, strong and resilient as those of the younger person. X rays of the joints of people past middle age (and sometimes in even younger people) may show abnormalities of the lining cartilage and the bones that make up the joints (eg thinning of the cartilage, "wear and tear", bony outgrowths, etc), but these radiological (ie X ray) findings may be present in very many people who do not have any problems in those joints. An X-ray report of joints which describes "arthritic changes" does not necessarily mean that the person with such changes has any significant pain or problem with that joint.

6.3 Osteoarthritis (Osteo-Arthrosis, Degenerative Joint Disease)

6.3.1 This disease of joints is not usually inflammatory but is characterized by wear and tear of the joints and is generally age related. It is the commonest type of arthritis. Joints which are particularly prone to develop osteoarthritis are the hip, knee, hands and spine. Past or continuing trauma (ie injury) to the joints can accelerate the onset of osteoarthritis

6.3.2 In the great majority of persons with osteoarthritis the disease is mild (with minimal or no needs) and principally affects one particular joint, which is the main source of pain and discomfort, such as the knee or hip, with minor or no involvement of other joints. The condition may have come to light

during x-ray examination, even before the symptoms were noticed. [See para 6.2.7 above]. In other people, however, the disease is more severe, causing deformity and extreme pain in affected joints. The problems may be alleviated by surgery, to replace the diseased joint with an artificial one (prosthesis). Those most commonly replaced in this way are the hip and knee joints. This operation is most often successful in significantly relieving joint pain and restoring pain-free movement.

6.3.3 In older people multiple joints are affected and, because of disuse of the joints due to pain, there may be muscle wasting. This can be a factor contributing to falls in the elderly [see Chapter 4].

6.3.4 Care Needs

(i) In osteoarthritis, the need for help and its frequency, will depend very much on the number and location of joints involved and the degree of deformity, which may be so severe that surgical intervention is necessary to correct it and to relieve pain.

(ii) Loss or limitation of hand and arm function may lead to a need for help during the day. In the early stages of the condition manual dexterity may be impaired leading to difficulty in handling common utensils. It may also make simple household tasks difficult or dangerous depending upon the degree of loss of function and reduced manual dexterity, and, of course, whether one or both hands/arms are involved.

(iii) When hip and/or knee function is limited or restricted with reduction in the ranges of movement at these joints, there may be problems with bathing, dressing and undressing the lower half of the body, going up and down stairs and rising from a chair and in walking. In the older person, help may be needed getting out of bed in the morning and back in at night.

(iv) Even when suitable, readily available, equipment or technical aids resolve some difficulties, others may persist and will depend upon individual circumstances.

6.3.5 Mobility Considerations

(i) Loss of hip and/or knee functions, especially when these are associated with problems in the ankles and feet, may lead to substantial difficulties in walking and being able to get around both in the home and outdoors. When the knee is affected the joint may become unstable, increasing the risk of falls, particularly in elderly people.

(ii) In people with long-standing and advanced osteoarthritis of weight-bearing joints (such as the hip, knee, ankles and feet, etc) treatment with pain-relieving drugs (analgesics) or anti-inflammatory medications and physiotherapy, etc, may not significantly improve walking. Where joints have been replaced, however, walking itself and pain associated with walking is usually very much improved.

6.3.6 Duration of Needs

In people with the much more common milder forms of osteoarthritis care needs are minimal and walking is not usually limited to a significant extent.

However, even in people with the milder forms of osteoarthritis affecting the weight-bearing joints there may be short periods lasting several weeks when there is increased pain and stiffness which may affect care needs and walking. The duration of established care needs and walking difficulties may be reduced, or even eliminated, by successful replacement with prosthetic joints.

6.4 Inflammatory Joint Diseases

- 6.4.1 Rheumatoid arthritis** is a chronic inflammatory disease involving many joints simultaneously (**polyarthritis**), and most commonly involving the small joints of the hands and feet, in a symmetrical fashion (ie: both wrists, both ankles). The affected joints become painful, swollen, stiff and in some cases deformed. The effects of disability are generally more severe than in osteoarthritis. Its onset is most often in a younger age group than those affected by osteoarthritis - even in childhood - but it may start in the older person. Many complications (in adults and children) may be found in severe arthritis which involve various parts of the body, including the heart, small blood vessels, the lungs, kidneys, eyes and spleen.
- 6.4.2 In juvenile chronic arthritis (Still's disease)**, the disease tends to affect the larger joints and growth can be impaired. Prognosis (outcome) is more favourable than in rheumatoid arthritis. For the majority of children the disease will "burn out" by the age of 16 or 18. Response to surgery such as hip or knee replacement is usually successful.
- 6.4.3** Other diseases which manifest principally as a chronic polyarthritis are **psoriatic arthritis**, **reactive arthritis** (Reiter's Syndrome), and **ankylosing spondylitis**.
- 6.4.4 Psoriatic arthritis** is similar to rheumatoid arthritis, the main difference being that it is usually associated with the skin condition psoriasis, and usually leads to less overall joint disablement. Rarely it can give rise to a particularly severe form of arthritis with severe joint destruction and resulting gross disablement when care needs will be at least as great as those described for severe rheumatoid arthritis.
- 6.4.5 Reactive arthritis** is a polyarthritis found in association with certain infections in other parts of the body. These are often in the gut or the urogenital system.
- 6.4.6 Ankylosing spondylitis** mainly involves the joints of the spine, is commoner in men, and often leads to a stiff and rigid spine. Symptoms may become worse with time, spreading from the low back to mid back and then the neck. Unless other joints than the spine are involved care needs

and mobility considerations will be similar to those in people with the painful back [See Chapter 7]

6.4.7 Care Needs

- (i) In **rheumatoid arthritis** there is characteristically a prolonged period of joint stiffness in the morning on arising from bed, and after sitting in a chair for some time. During these periods of joint stiffness the affected person has to "limber-up" slowly and so may need help with dressing, rising from bed/chair, and washing. Bathing or showering in the morning may assist in the "limbering-up" process, and help would be required for this. The duration of morning stiffness often exceeds an hour in those with active inflammation of several joints. Even in remission, between the flare-ups, damaged joints may be painful and stiff in the mornings causing difficulties in taking medication, bathing and dressing.
- (ii) Damage to the joint structure may result in weakness of ligaments, tendons and surrounding muscles, causing the hands and wrists to be weak with markedly impaired grip and loss of dexterity. Involvement of the finger joints may also seriously impair grip and manual dexterity, preventing the person from handling utensils, and making it difficult to cut food. In the early stages there may only be slight impairment of manual dexterity but help may be needed in the preparation of meals. If the shoulders and neck are affected this, too, may lead to difficulties with washing, dressing, cutting up food, and eating. Putting on and taking off outdoor clothing, splints (when used) and collars may also pose problems.
- (iii) Except in those with highly active disease, there should be little need for attention at night for such activities as toileting and turning in bed. During flare-ups, however, when splints and collars are used at night, removal of these to attend to toilet needs may be difficult. Help may also be required, in these circumstances, for taking pain relief medication.
- (iv) Due to disuse atrophy (ie wasting of muscles) because of painful lower limb joints, falls can be a problem, generally in the older person.
- (v) In **ankylosing spondylitis**, because of back stiffness, assistance may be needed with lower garments when dressing and in getting in and out of the bath.

6.4.8 Mobility Considerations

- (i) Walking may well be impaired in those with active inflammation of joints in lower limbs. When the feet are affected, this may cause severe pain on walking. If knees and hips are involved, standing and sitting can be difficult and painful, and walking more severely limited.

6.4.9 Duration of Needs

- (i) The needs of persons with highly active joint inflammation may lessen dramatically when spontaneous remissions occur or in response to drugs. These drug treatments are associated with an improvement in the extent and severity of arthritis. When this occurs it will be likely to do so within about one year's treatment. Patients are most responsive to treatment in the initial stages of rheumatoid arthritis (ie. 2 to 5 years following onset).
- (ii) There will be older patients with a longstanding history of rheumatoid arthritis in whom the disease may be "burnt-out", leaving many of the smaller joints of the hands deformed with poor hand function or resulting in fixed deformities of lower limb joints with impairment of walking ability. In these people the needs will depend upon the overall disablement in the individual case but are unlikely to change throughout the remainder of the person's life.
- (iii) In the majority of people with rheumatoid arthritis, the disease smoulders on, involving further joints, and slowly increasing levels of disability and associated needs.

6.5 Osteoporosis

6.5.1 Osteoporosis is the name given to a reduction or thinning in the total mass of bone present in the body. The precise mechanism causing this disease is unclear. It is found most frequently in women after the menopause, particularly in the older woman; and in people receiving long-term treatment with steroid compounds, eg, for rheumatoid arthritis. Sometimes the condition is noted in younger women who have had their ovaries removed (oophorectomy). Inadequate physical activity promotes generalised osteoporosis and the condition also occurs in various glandular disorders and in cases of severe malnutrition and chronic renal (kidney) disease.

6.5.2 The condition is of variable severity. In its mild form it may give rise to no symptoms and may be a chance X-ray finding. When the condition is more severe, pain may be a feature. This is usually due to fractures of the "brittle" bones, often occurring after only minor injury. Persistent backache may occur later on in the disease, due to progressive compression or collapse of several vertebrae. The healing of fractures is not usually impaired and, with healing, the pain usually subsides. There is also a tendency for the condition to improve spontaneously, or with treatment. Suitable physical exercise is also helpful.

6.5.3 Care Needs and Mobility Considerations

- (i) In all but its most severe forms osteoporosis of itself may be symptomless and give rise to no mobility problems or care needs. Even when there has been very considerable loss of bone mass it will be the pain and functional limitations associated with fractures or bone collapse (particularly in the back) that may give rise to care needs and mobility problems. In these severe cases (generally in elderly women) there may well be considerable care needs arising from disability associated with fractures. These commonly occur in the region of the wrist, back and hip joint. When fractures occur in the back or in the weight-bearing joints there may well be adverse effects on walking. Progressive collapse of the spinal vertebrae may result in a shortened, curved back causing chronic pain and walking problems.
- (ii) A person affected with this level of disease and its complications may also have difficulty with getting in and out of bed, rising from a chair, dressing and undressing, preparing a main meal and attending to toilet needs. Under such circumstances, and particularly in elderly people, there may be care needs both by day and by night.
- (iii) When assessing the care needs which may arise, consideration should also be given to any other recorded disability(ies) which may give rise to mobility problems or care needs in their own right and which may interact with any needs arising from osteoporosis.
- (iv) Although the intellect is not affected in this disease, any tendency to fall may give rise to supervisory needs in elderly frail people, because of the increased risk of broken bones, and difficulty in rising after a fall..

6.5.4 Duration of Needs

Fractures heal at the normal rate, so that any resultant disability may not last more than a few weeks or months. This is particularly so in the younger person. In elderly people with osteoporosis who have sustained frequent fractures with progressive collapse of the spinal vertebrae, significant improvement in disability and care needs is unlikely during the remainder of the person's life.

6.6 Hypermobility Syndrome

- 6.6.1** The hypermobility syndrome (HMS) is one of a group of inherited diseases which affect the connective tissues of the body. It is a multi-system disorder which may result in a wide variety of clinical features and disabilities.
- 6.6.2** Fibrous proteins (collagens, elastins, fibrillins) give the body its strength. A defect in genetic information which determines the biochemical structure and strength of those proteins may cause structural weakness in muscle, tendon, ligament cartilage, bone, the blood vessels, eyes and skin. The clinical effects depend on the function of the particular tissue affected.

Joints may become lax, unstable and hypermobile with increased tendency to dislocation and vulnerability to the effects of injury. **Bones** may become osteoporotic, predisposing to fractures. The body-shape may take on characteristic body proportions (called "Marfanoid") with long slender limbs, twisting of the spine and chest deformity. **Skin** shows increased stretchiness and the blood vessels (vasculature) may also be affected in certain of the diseases associated with HMS, such as the Ehlers-Danlos syndrome, with involvement of the heart and major vessels. **Eye** involvement may occur as dislocation of the lens in the Marfan syndrome where the lens ligament is lax and unable to hold the lens in a stable manner.

6.6.3 Approximately 10% of the adult population is hypermobile. The prevalence varies among different ethnic groups and is greater in women. The majority of affected people have no significant disability. People in some occupations or pursuits find it an asset, for example ballet dancers, gymnasts, yoga, violin players, flautists, snooker players. However, any hypermobile joint is vulnerable. The hypermobile back if used excessively, may be subject to prolapsed discs, stress fractures, spinal narrowing and other mechanical problems. People with severe forms of hypermobility syndromes (particularly those with greater degrees of tissue laxity and fragility) may lead a restricted life because their tissues are so fragile.

6.6.4 Symptoms tend to be similar in hypermobility syndromes irrespective of the cause. Due to the weaknesses in muscle, ligaments, tendons and cartilage, etc, there may be joint pain, dislocations of joints, and fractures. In any hypermobile joint, "over-use" injury can cause pain and loss of function. The same is true of the back. Stress fractures of bone are not uncommon. Joint and/or muscle pain may be a prominent symptom. Hypermobility may be a serious potential source of problems in children. Many will develop osteoarthritis in time. With age, joint hypermobility declines, but other complications resulting from HMS may arise, such as secondary osteoarthritis; osteoporosis with resultant fractures; and loss of balance particularly in the older person, which may result in falls, especially if there is also impaired vision.

6.6.5 Care Needs

(i) People with severe forms of the hypermobility syndrome may be in frequent or constant pain that is worsened by movements, especially those involving physical effort such as lifting, moving around etc. Joints may dislocate during quite simple movements eg. with the hands or shoulders. When the tissues are damaged, physically demanding activities are also painful and give rise to care needs from another person. Depression may ensue - partly because of the pain, partly because of the inability to perform some normal daily tasks and to enjoy a normal life. Periods of rest throughout the day may be required especially after what a normal person might consider a modest bout of physical activity. Falls may occur so that certain activities such as bathing, using stairs, etc may need to be supervised, particularly in elderly people with this syndrome.

- (ii) Main meal preparation, especially cutting up vegetables, opening jars, lifting pans and using taps may prove to be difficult in those with more advanced disease.

6.6.6 Mobility Considerations

- (i) Because the connective tissues are lax and fragile they may be easily injured. The combination of joint pain (especially in the knees) and instability (back-bending, knees, etc) may make walking difficult. There may also be problems with balance.
- (ii) The ability to walk may be limited in people with severe forms of the syndrome, requiring the use of walking aids (cane, crutches) or wheelchair. The person may have a tendency to lose balance and fall, with difficulty getting up.

6.6.7 Duration of Needs

- (i) Many of the clinical manifestations of hypermobility syndrome result from sudden injuries to the soft tissues which heal within weeks or months, either spontaneously or after medical, surgical or physiotherapy treatment. Once severe irreversible damage has taken place to joints the outlook is largely determined by whether that joint is amenable to joint replacement. Disability associated with chronic painful conditions (eg back pain or widespread osteoarthritis) is less likely to respond to treatment and may persist indefinitely.

6.7 Further Evidence

Because of the wide range of clinical manifestations and spectrum of disability and needs in musculoskeletal disorders it may often be necessary to obtain further evidence, in the form of a GP report or a report by an examining medical practitioner, in order to assess the nature, level and likely duration of needs. If the person is under the care of a rheumatologist, a report from that source may be particularly helpful.