

Work and the musculoskeletal conditions

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Musculoskeletal conditions represent one of the major causes of loss of work. Back pain alone accounts for 119 million lost working days per annum. The conference explored the ways in which various musculoskeletal problems can be caused, or influenced by, the nature of the individual's work and also how those with rheumatic disorders can be helped to remain in employment. The unifying theme was that multiple factors, both specific and more general psychosocial issues, interact to cause work disability and that management of this does not stop with medical treatment but requires a multidisciplinary approach involving the appropriate agencies.

Occupation-induced connective tissue diseases

Most autoimmune connective tissue diseases (CTD) are idiopathic but exposure to agents such as silica, organic solvents and resins is a major aetiological factor in some cases. Exposure to crystalline silica dust in occupations such as mining, quarrying and farming has been associated with the development of systemic sclerosis, rheumatoid arthritis, systemic vasculitis and systemic lupus. This effect of silica may be due to its adjuvant property to enhance immune reactivity. Increased risk correlates with the degree of exposure. Interaction of the environmental trigger with specific genetic factors influences both the susceptibility to, and expression of, CTD features. For example, the susceptibility of workers exposed to vinyl chloride to develop the scleroderma-like features of 'vinyl chloride disease' is associated with the presence of HLA DR5 whereas severity of the condition is associated with HLA DR3. Recognition of occupation-induced CTD has contributed to legislation protecting workers against undue exposure to these potentially toxic substances by demanding efficient dust suppression and ventilation, protective clothing and the setting of exposure limits and careful monitoring for symptoms.

Work place factors in the aetiology of musculoskeletal pain

More than 40% of an unselected population sample will report pain in the previous month that has lasted more than three months. The burden of symptoms in the work place can be assessed from the Health

and Occupation Reporting Network (THOR) through which about 8000 cases per year in workers are consistently reported. A high proportion have upper limb pain in contrast with an unselected population where the involved sites are mostly lower back, hips and knees. The Manchester Study of New Workers shows that the effects of mechanical factors related to load, posture and repetitive movements tend to be site-specific. On the other hand, psychosocial factors such as psychological stress, hectic and monotonous work, and lack of control are important risk factors for pain at several sites. The National Institute for Occupational Safety and Health (NIOSH) review of risk factors in work-related musculoskeletal disorders came to the same conclusions.¹ The challenge is to combine increasing knowledge concerning risk factors with actions to reduce the burden of work disability.

Does RSI exist?

Repetitive strain injury (RSI) is a meaningless term: pain does not always occur in association with repetitive movements, strain is often used to imply damage, and there is no sign of injury. By consensus, the preferred term is 'nonspecific forearm pain' defined as pain in the forearm associated with work in the absence of specific pathology. Cross sectional studies have shown a high prevalence in selected occupations associated with repetition, high force and abnormal posture. A recent prospective study² across a variety of occupational groups showed an annual incidence of 8.3%. In addition to physical risk factors, such as repetition, high force and abnormal posture, nonspecific risk factors are also involved. While clinical criteria have been established for surveillance, a consistent biological marker to facilitate the study of forearm pain is elusive. Factors such as increased muscle fatiguability, peripheral nerve entrapment possibly aggravated by a congenitally small carpal tunnel, abnormal autonomic nerve function and, more recently, cortical dissonance with abnormal central processing of peripheral sensory signals may prove useful. To accommodate this multifactorial aetiology, biopsychosocial models have been proposed as a rational basis for research and treatment. To date, several studies have shown that ergonomic modification has a beneficial effect on forearm pain and complex interventions,

including education and training, monitoring for symptoms and employee involvement, dramatically reduce forearm pain.

Musculoskeletal problems in musicians

Musculoskeletal problems, although under-reported so as not to jeopardise the sufferer's employability, are common in professional musicians. About 50% experience problems at some stage of their career. Nearly two-thirds have pain associated with musculo-tendinous overuse and other causes include neuropathy and focal dystonia. String players are particularly at risk because they are in action during most of the performance, and because of the asymmetric activity involving fine fingering of the left hand and bowing utilising the other shoulder and upper arm. Added factors are the strength needed to manage the larger instruments such as the cello and the awkward position demanded by violin playing. The consequences are tendinitis of the left hand of violinists, rotator cuff problems particularly in cellists and spinal problems affecting the upper spine and neck in violinists and the lower spine in cellists. Professional musicians often start young and the long hours of playing have an effect on musculoskeletal development producing spinal deformities and asymmetrical skeletal and muscle development especially in string players. Many performers are hypermobile and, while this confers early advantage, this may cause problems later. 3D movement analysis is a way of studying movement patterns specific to particular instruments and those that might predispose to musculoskeletal injury. Basic rules of management include:

- Early intervention to circumvent superimposed psychological factors
- Observation of the playing technique
- Full discussion of both diagnosis and likely prognosis
- Avoid inappropriate advice to stop playing or change instrument
- Employ an holistic, multidisciplinary approach to management
- Specialist advice on playing technique.

Different diagnoses need different approaches but outcomes are usually good except for focal dystonias, which have a poor prognosis and often require a career change.

Working through arthritis

'Far and away the best prize that life has to offer is the chance to work hard at work worth doing.' (Roosevelt)

A representative from Arthritis Care described her experience of rheumatoid arthritis (RA) over 26 years, from the age of 24. She has worked for 20 of those years. Unable to cope working initially as a librarian carrying books, pushing trolleys, standing and walking, she experienced all the difficulties discussed during the afternoon:

- Personal – knowing whether to disclose her illness to potential employers

- Employers – unable to cope with a disabled individual
- Educationalists – no specialist advice for a disabled student!
- The state:
 - no benefits for part-time students
 - benefits trap for those working part-time
- Transport – commuting into London after hip replacement.

Eventually, supported by her husband, a postgraduate diploma and the government's 'Access to Work Scheme', Arthritis Care employed her, initially as a volunteer.

Government

The government wishes to increase participation in work for those of working age disadvantaged by illness or disability as:

- 2.7 million people of working age are on state incapacity benefits (<1 million unemployed)⁴
- 20% of people of working age have a long-term disability (7.1 million people)
- 50% of the disabled UK population are economically inactive (15% for non-disabled).

The impact of incapacity includes loss of confidence with depressed mood, stigma and social exclusion as well as poverty. Worklessness is now a major public health issue.

Evidence supports interventions such as one-to-one support using skilled people who understand individual's vocational

Conference programme

■ Occupation-induced connective tissue diseases

Dr David D'Cruz, The Lupus Research Unit, London

■ Work place factors in the aetiology of musculoskeletal pain

Professor Gary Macfarlane, School of Epidemiology and Health Sciences, University of Manchester

■ Does RSI exist?

Dr Philip Helliwell, University of Leeds

■ Musculoskeletal problems in musicians

Professor Lynne Turner-Stokes, King's College London

■ Working through arthritis

Ms Eileen Francis, Arthritis Care

■ Pathways to work – the Government's perspective

Dr Philip Sawney, Department for Work and Pensions, London

■ Rehabilitation of minor health complaints

Professor Gordon Waddell, Orthopaedic Surgeon, Glasgow

■ An occupational physician's view from the workplace

Dr David Beaumont, Business Healthcare

■ Working and arthritis – role of Arthritis Care

Ms Eileen Francis, Arthritis Care

■ Helping those with arthritis remain in work

Professor Anne Chamberlain OBE, University of Leeds

needs (including self-confidence and training) and employer-support. Biopsychosocial management with local partnerships between health, employment and the voluntary sector are being investigated.

Employers

Few offer occupational health provision. Forty-seven percent of certified sickness absences are stated as caused by musculoskeletal conditions but may reflect other factors. Understanding precisely what a job entails, most disabilities can be accommodated, given appropriate job modification. Modified hours should enable employees to have the necessary time off, for example for rehabilitation. A phased return to work should be time limited after which redeployment may be needed. Ill-health retirement should be reserved for the few unable to return to any kind of work.

Non-health factors include job satisfaction. The role of management in creating a workforce with high morale is frequently underestimated. Good employers understand the difficulties – the physical and emotional variation associated with conditions such as RA: eg transport and parking. They can

offer flexible hours, control over the pace of work and modified equipment through the Access to Work Scheme.

Rehabilitation

‘What is rehabilitation?’ Is it a process embarked upon after medical interventions – in the absence of a cure – usually by someone else? Has British medicine concentrated on facilitating independent living to the detriment of functional outcomes? Common complaints are experienced by many and should not lead to long-term incapacity eg most with low back pain have no evidence of severe structural impairment. Why do some not recover as expected? Obstacles to a return to work may be biological, psychological or social (see Table 1).

These obstacles are overcome by balancing residual abilities with job demands. This may require increasing health capacity (through rehabilitation) or liaising with employers to decrease work demands. Symptom treatment may not restore function. Increasing activity and restoring function are equally important to delivering good health care. There is good evidence for ‘job modification’ in getting people back to work. These processes are best offered between six weeks and six months, before disability patterns become established.

Table 1. Potential obstacles to a return to work.

Personal
– lack of skills, qualifications and finance
– partners – may not be supportive
– perceptions of illness eg fearing a return to work might aggravate their pain
– job dissatisfaction
Health
– negative advice from health professionals
– waiting times
– GPs unable/unwilling to communicate with employers
– GPs providing sickness certificates without due care and thought
– rehabilitation – often inadequate
Employers
– insisting on employees only returning to work when they are 100% fit
– absence policies – inadequate
– line managers – negative attitudes
– lack understanding of the Disability Employment Legislation
– inflexibility
– ignorance about the illness – also in employees
– fear of litigation – eg if someone returns to work and gets recurrent illness
Other
– financial disincentives (benefits or insurance)
– compensation, attitudes of some lawyers and trade unions
– difficulties managing uncertainty and communication
– stigma and discrimination

Self-management and the voluntary sector

Self-management programmes, such as those run by Arthritis Care, include pain management, coping with emotions (anger, depression, and fear), communication and medical issues. Participants may be challenged weekly to ‘achieve’ and thus develop confidence with consequent lessened symptoms (depression, sleep loss).

One participant commented:

‘Before I came on this course I believed I had nothing to offer. I now feel more confident, motivated to make changes in my life and eager to get started on my long-term plan to return to work.’

The challenge of rheumatoid arthritis

Work disability is 15% within the first year, creating major challenges as some may lose their job before even having specialist advice. Work loss due to RA relates to the ‘person’, the ‘disease/disability’ and the ‘environment’. Person-related risk factors include age, education and personality eg confidence and assertiveness. Disease-related factors include the disease severity, activity flares, frequent hospital visits, pain intensity and disability. Worksite-related factors include physical job demands, the psychological environment and employer attitudes (see Table).

Rehabilitation is cost effective. American insurers found an average saving of \$35 in disability reserves for every dollar spent on rehabilitation services. Rheumatologists and their teams need to spot patients with a mismatch between their abilities and work demands (‘work instability’) before jobs are lost. Potential interventions include therapeutic advice, work-site assessment, equipment/modifications and liaison with the employer.

Conclusion

Many employers and health professionals lack understanding of current vocational rehabilitation.⁵ Early return to the workplace, even with ongoing medical issues, is crucial in using the 'window of opportunity' between six weeks and six months. Employees, health professionals and employers have to work together to enable those with minor or recurrent health problems get back to work as well as those with severe disability.

Physicians need to be aware of the influence of work on illness and how the disadvantages of illness can be overcome in the workplace.

Finding out about Arthritis Care

To find out where courses are running, visit Arthritis Care website on www.arthritiscare.org.uk. UK office Tel: 020 7380 6500.

References

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