Nursing case study: osteoarthritis (oa) management

Introduction

Over 60% of adults in England suffer from a chronic health problem (Department of Health 2004). Osteoarthritis (OA) is among the most common chronic conditions, particularly among older adults, and is a cause of considerable pain and disability among affected individuals. The prevalence of OA has been estimated at 2. 5% in the overall population, increasing to 12% among those aged 65 years and over (Wood 1999). OA is a complex condition with multiple risk factors of age, sex, overweight or obesity, genetics, and biomechanical factors (e. g. joint injury or occupational or recreational use). It is possible for OA to develop in any synovial joint but the spine, hip, knee, hands most commonly affected, either in isolation or in combination (Steven and Finlayson 2005). Typical symptoms of OA include joint pain, stiffness, limited movement, crepitus and swelling, and symptoms may be static, relapsing or progressive (Steven and Finlayson 2005). Structural changes within the joint may also occur in the absence of any symptoms.

OA places a considerable burden on healthcare resources, with data published in 2002 showing this condition to be responsible for over 11 million GP visits and more than 114, 500 hospital admissions (Arthritis Research campaign 2002). OA also impacts significantly on the economy. In 1999–2000, it was estimated that a total of 36 million working days were lost due to OA alone, resulting in £3. 2 billion in lost productivity (Arthritis Research campaign 2002). It is therefore important that OA is managed effectively in affected individuals. This paper discusses a patient that I have nursed with

osteoarthritis and examines the effectiveness of their care in the management of this condition.

Patient case history

Mrs Smith is aged 78 years and lives independently in a two-storey house with her husband, aged 82 years, who is her main carer. She has osteoarthritis of the knees, hips and hands and also has hypertension and diabetes. She is taking four medications for these conditions. Eighteen months ago, she underwent emergency hospital admission for a urine infection. After being discharged from hospital, assessment showed her to be at an increased risk of repeated admissions due to her multiple pathology, polypharmacy and previous hospital admission. The care she had received prior to hospital admission was below standard and self-management of her condition was poor. Her GP referred her case management to a community matron who worked alongside a multidisciplinary team of healthcare professionals (I was a member of this team) and her husband to co-ordinate her care and help Mrs Smith reduce her risk of future hospital admissions. The community matron was involved in Mrs Smith’s programme of care for a total of two months, after which time co-ordination of her care was handed back to her GP.

At the initial assessment, Mrs Smith was found to be experiencing high levels of pain which affected her sleep patterns and showed symptoms of depression. She also reported relationship problems. At present, her pain is being managed effectively through a combination of pharmacological and non-pharmacological interventions which include self-management; she

reports normal sleeping patterns and shows no signs of depression. Her relationship with her husband has also improved and Mrs Smith is now no longer at increased risk of future hospital admissions.

Managing individuals with chronic conditions

The care and management of chronic conditions should address individual needs and expectations. The government has set Public Service Agreement (PSA) targets for improving outcomes for people with chronic conditions. These include reducing emergency bed days by 5% and increasing the number of older adults who are supported to live at home by 1% by 2008, from the 2003/4 baseline (Department of Health 2005). With the aim of meeting these targets, the NHS and Social Care Model was developed to help Primary Care Trusts (PCTs) and social care organisations improve care for individuals with chronic conditions (Department and Health 2005). From 2005, all PCTs are required to provide personalised care plans for those individuals who are most at risk. Initiatives such as the Expert Patient Programme are included in this model and will be discussed later.

Providing high-quality care for older adults

The NHS Plan set out a programme of reforms for the NHS (Department of Health 2000). Based on the underpinning principles of this plan, the National Service Framework for Older People was implemented to ensure that the needs of older adults are adequately addressed in these reforms (Department of Health 2001). This will be achieved by ensuring high standards of care are provided for all patients, improving access to care, and developing services which promote independence. The Essence of Care,

published in 2001, sets out benchmarks for clinical governance covering eight areas of care which identify required standards for high-quality care and indicators for best practice (NHS Modernisation Agency 2003).

NHS reforms have led to changes in the role of nurses, providing new opportunities for nurses to extend their existing roles, together with the introduction of new roles such as the community matron in the community setting and modern matrons in the hospital setting (Department of Health 2001). *[Client: since we don ' t discuss care in the hospital setting elsewhere, I haven ' t discussed the role of the modern matron any further]* This paper will examine the role of the nurse as part of a multidisciplinary care team in the care of Mrs Smith.

Care and management of osteoarthritis in older adults

The management of OA in adults becomes increasingly complex with advancing age (Holman and Lorig 1997). Since there is no cure for OA, the main therapeutic goals are to minimise the effects of the disease and over time. Effective care involves building long-term interpersonal relationships between healthcare providers and patients, carers, family members, other care providers, and those organisations involved in providing care and support. A holistic approach to assessment and treatment is required that considers the physiological, psychological and social needs of the individual in relation to their quality of life and daily activities (Salaffi et al. 1991). Both the National Institute of Clinical Excellence and the Royal College of Physicians have recently published guidelines for the care and management of osteoarthritis in adults (National Collaborating Centre for Chronic

Conditions 2008; NICE 2008). The care of Mrs Smith will be discussed in the context of the recommendations made in these guidelines.

Assessment

The single assessment process for older adults was introduced in 2000 as part of the NHS Plan (Department of Health 2000). This requires an assessment of the individual's health and social care needs to take place in a single assessment and was designed to standardise the assessment process and raise standards of assessment practice. During Mrs Smith's assessment, her concerns, expectations and level of knowledge about her condition were discussed, together with the effect that her osteoarthritis had on daily activities including personal hygiene, climbing stairs, getting up from chairs, etc, and on her sleep patterns. Her levels of pain and mood were also assessed. Mr Smith also participated in the assessment, in order to gain his perspective on his wife's condition and to establish how well he was coping as her carer, and also to identify any specific health need he might have. Further specialist assessment of Mrs Smith and her ability to undertake daily activities, together with an environment assessment, were undertaken by an occupational therapist.

Mrs Smith's level of knowledge about her condition was poor. Three other key issues were also identified during the assessment, namely pain management, depression/anxiety and relationship problems. Mrs Smith reported increasing pain in her joints, particularly her knees and hips prior to her admission to hospital which was so bad she was unable to sleep at night. The care she had been receiving prior to this had not effectively addressed

this increasing pain. Screening and assessment showed Mrs Smith was suffering from mild depression. She reported feeling distress that she was no longer able to undertake many household tasks that she used to be able to do or participate in recreational activities with her husband that she used to enjoy. The increasing pain she had been experiencing prior to her hospital admission also contributed to her feelings of depression. She reported feelings of anxiety over fears that she may be made to leave her home as she could no longer manage to climb the stairs. Mrs Smith showed negative feelings regarding her past care and was initially pessimistic about the likely effectiveness of the proposed treatment in the current care plan. Mrs Smith expressed concern that her relationship with her husband was suffering because her pain and lack of sleep made her irritable and short tempered. An additional factor compounding these problems was her husband's poor hearing which served to make her more irritable. All of these issues are common among adults suffering from OA (Farmer et al. 2008), and is important that their care plans effectively address these needs.

The nurse plays a pivotal role in the assessment of individuals with chronic conditions and it is important for the nurse to establish a successful therapeutic relationship with the patient and their carer(s) as early as possible in the process. Effective communication and building trust is central to this relationship and it is necessary to gain the perspective of both the patient and carer to develop a thorough understanding of individual needs.

Development and implementation of a personalised care plan

Empowering patients to take part in decisions regarding their care is central to the government's health service policy agenda (Department of Health 2000). The empowerment of older adults is also addressed in the NSF for Older People (Department of Health 2001). Research suggests that patient empowerment may help to strengthen patient's ability to self-manage their condition (Corben and Rosen 2005). It is also beneficial to involve families and carers in the decision-making process, with the consent of the patient. A personalised care plan was developed for Mrs Smith with the involvement of both her and her husband, which was tailored to meet her individual goals. This plan enabled high-quality, patient-centred care to be delivered via a multidisciplinary team of healthcare professionals which included her GP, nurse, physiotherapist, occupational therapist and community matron. Social services were also involved in providing additional support for both members of the couple. Taking account of Mrs Smith's multiple pathology and polypharmacy and the use of research-based evidence were both of major importance when developing this care plan.

Interventions within the care plan and the individual roles of healthcare providers

Non-pharmacological interventions

The provision of education and advice and muscle strengthening exercises were the two core interventions in Mrs Smith's care programme. Research has shown that patients frequently report better outcomes when they receive education and advice as this empowers them to become more involved in their own care and equips them with the knowledge and skills

required for self-management (Holman and Lorig 1997). Educating both Mrs Smith and her husband about her condition and methods of self-management formed a key component of her care plan and discussions were primarily nurse-led.

Encouraging self-management is essential for all chronic conditions and providing a framework for self-management is an integral aspect of care (National Collaborating Centre for Chronic Conditions 2008). The Expert Patients Programme (EPP) was introduced in 2003 following the success of the Stanford Self-management Programme in the United States (Department of Health 2006). Research which provides the rationale for this programme suggests that patients who have trained in self-management have greater confidence and use their skills and knowledge to improve their overall quality of life. These individuals subsequently require fewer healthcare resources, leading to long-term cost savings. Self-management courses are run trained by lay leaders rather than healthcare professionals. To date, the success of EPP in the UK has been limited compared with that of other rehabilitation programmes for chronic conditions (Bethell et al. 2007).

A physiotherapist taught Mrs Smith to perform a series of gentle exercises to strengthen the supporting muscles around her knee which she was then able to perform on a daily basis by herself at home. An occupational therapist recommended a number of modifications to Mrs Smith’s home to make performing daily tasks easier. These included the installation of a raised toilet seat and wall bars in the bathroom. The occupational therapist also arranged the provision of shock- absorbing shoes to help reduce the pain in Mrs Smith’s knees and hips. Due to Mrs Smith’s limited mobility,

opportunities for visits outside the home were restricted. However, social services arranged for both members of the couple to attend weekly bingo sessions at their local community centre which provided the opportunity for social interaction with other older adults which both members of the couple found beneficial.

Pharmacological interventions

Oral paracetamol and the use of topical NSAIDs for the knee were prescribed for Mrs Smith. Paracetamol and topical use of NSAIDs are the currently recommended first-line treatments for knee OA (NICE 2008). Paracetamol alone was not sufficient to control Mrs Smith's high levels of pain in her knees. Since her antihypertensive medication was a calcium channel blocker, the use of NSAIDs were not thought to be contra-indicated and were unlikely to show drug interaction with her other medications (Luque et al. 2006). Following discussions with Mrs Smith, a decision was taken not to prescribe anti-depressants initially but to monitor her symptoms of depression and revise her care plan if necessary.

Throughout Mrs Smith's programme of care, the role of the nurse involved making regular home visits to assess Mrs Smith and her husband. Monitoring the effectiveness of the interventions implemented is essential if the goals identified within the care plan are to be achieved. Regular reviews of the care plan should be made and changes made as required based on the outcome of ongoing assessments. Prior to the involvement of the community matron, Mrs Smith's GP practice was responsible for co-ordinating her care. The community matron is a relatively new clinical specialist position within

the NHS, introduced specifically to provide support for people with long-term complex conditions (Department of Health 2004). Working alongside GPs, community matrons perform various roles which enable patient's need to be met within the community rather than in hospital (Bassett 2005). The role of the community matron in this instance was in short-term case management.

Addressing the carer ' s needs

Evidence suggests that the health needs of carers are frequently overlooked (Hare 2004). It is also important that carers receive adequate support as feelings of isolation and being unable to cope are common (Department of Health 2004b). Mr Smith's health needs were assessed during the initial assessment and addressed accordingly. Mr Smith suffered from angina for which he was already taking medication, and poor hearing. A follow-up specialist assessment of his hearing identified the need for a hearing aid which he received. The health of both patient and carer was then assessed by the nurse during subsequent home visits.

Success of the care programme

Mrs Smith's care programme had a successful outcome. Her symptoms of depression reduced and her relationship improved once her pain was being managed more effectively and she was able to sleep better. Her mobility improved and confidence increased such that she was able to start taking short walks outside her home with her husband. She was also able to undertake more tasks within the home. Education about her condition led her to realise that OA is ' not the end of the world' and that life can still be enjoyable, provided her condition continues to managed effectively. Mr

Smith also received support from the healthcare team which helped to re-enforce his role as her main carer and extend his knowledge about his wife's condition, which better equipped him to care for her effectively. Mrs Smith's care was delivered using the appropriate frameworks for older adults and those with chronic conditions and was in line with current management guidelines.

Osteoarthritis and ageing

OA is more common among older adults and will therefore frequently co-exist with other age-related comorbidities such as cardiovascular disease, diabetes and hypertension, as demonstrated in the case of Mrs Smith. Because of this multiple pathology, polypharmacy is common and drug regimens are often complex (Gorard 2006). Polypharmacy may increase the risk of drug-drug interactions and drug-related adverse events. In some cases, drug-drug interactions may counteract the effect of a particular drug (Cotter and Martin 2007). For example, if beta-blocker or angiotensin-converting enzyme inhibitor antihypertensives are co-administered with non-steroidal anti-inflammatories (NSAIDs), the hypotensive effect of these drugs may be reduced due to sodium retention by the NSAID (Luque et al. 2006). Furthermore, older adults may also consume over-the-counter preparations (e. g. vitamins and analgesics) which also have the potential to interact with prescription drugs.

Age-related changes in both drug pharmacokinetics and pharmacodynamics may be observed, and increased drug sensitivity may increase the risk of drug accumulation and toxicity in older adults (McGavock 2006). Other

factors which should also be considered when prescribing drugs for older adults are (1) cognition – whether the patient is able to understand and follow their treatment regimen; (2) vision – visual impairment may prevent them from being able to identify their tablets correctly; (2) ability to swallow or fear of swallowing – some patients may be unable to swallow large tablets or may be afraid to do so for fear of choking. It is therefore very important to ensure that a full drug history is taken for every patient and other relevant factors are also taken into account.

Ethical and legal issues in the management of chronic illness

NHS funding for individuals with chronic illness has been the subject of considerable controversy in recent years. Advances in medical technology have allowed healthcare providers to considerably prolong the life of many individuals with chronic conditions and this ability, coupled with the increasingly ageing population, have presented an unsolved dilemma of how to provide comprehensive care with limited resources (Waldron 2006). Until recently, some patients have been caught up in a so-called ‘ postcode lottery’ whereby drugs and services may be available to individuals living in one region of the UK, but not another. This is considered by many to be against the founding principles of the NHS which was introduced with the vision of providing free medical care for all (Donnelly 2008). While it must be acknowledged that at the time of its conception sixty years ago, no one could have predicted the extent of future increases in population size within the UK, or the shift towards an increasingly ageing population which have placed an ever increasing burden on services ill-equipped to meet demand. Nonetheless, regardless of the extent of available resources, these should be

distributed fairly to all within the population regardless of location or any other factors.

Living wills are an issue which may concern individuals with chronic conditions, particularly those receiving end of life care. There may be circumstances in which some individuals may not wish to receive life-prolonging treatment and it is important that decisions and choices regarding their care can be communicated to care providers if they themselves are unable to do so. Allowing individuals to refuse life-prolonging treatment may be viewed by some as a step towards euthanasia which considers the right of an individual to choose when and how to die and which has been the subject of intense debate for a number of years.

The NSF for Older People (Department of Health 2001) addresses some of the ethical issues surrounding the care of older adults, in particular infringement of their dignity and unfair discrimination in access to care. This framework includes standards for (1) reducing age discrimination, ensuring that NHS services are provided on the basis of clinical need and that social services do not use age as a barrier to restrict access to services; and (2) treating older adults as individuals and allowing them to become involved in decisions regarding their care (i. e. promoting patient empowerment, as discussed previously). The Evercare programme also addresses the right of older adults to receive high-quality patient-centred care. This programme was introduced in the UK in 2003 after demonstrating success in the United States. It is designed to improve care for older adults who frequently have multiple pathologies and social problems, who may be receiving poor care, and who are often admitted to hospital as emergency admissions for reasons

that may have been preventable with higher standards of care. Those patients at highest risk of future hospital admission are identified for enrollment in the programme. A role of the community matron would be in identification of those individuals who may be benefit from this programme and in their case management. The principles of the programme include the provision of personalised, holistic care aimed at promoting independence, comfort and improved quality of life, and avoiding adverse effects of polypharmacy.

Conclusions

The management of chronic conditions such as OA presents a greater challenge in older adults with multiple pathologies, where successful outcomes may be dependent on a number of co-morbidities. The need for a full understanding of drug-drug interactions and age-related physiological changes is essential for accurate drug prescribing in this group of patients where polypharmacy is common. Effective management of Mrs Smith’s condition was achieved through a combination of self-management and health and social care. Effective care involved a holistic approach to assessment and treatment from a multidisciplinary team of health and social care providers. Within this team, nurses played a pivotal role in the community setting (and were also involved in providing care in hospital setting during her hospital admission).

There are a number of ethical and legal issues surrounding the care and management of chronic conditions, particularly in older adults where age discrimination and infringement of dignity have been highlighted as

widespread problems. Initiatives such as the Evercare programme have been implemented to address these issues but their success has yet to be demonstrated on a national level.

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