Assessment and management of pain in older adults with dementia: a review of current practice and future directions

Pat Schofield

Centre of Advanced Studies in Nursing, Department of General Practice & Primary Care, University of Aberdeen, Foresterhill Health Centre, Aberdeen, UK

Correspondence to Dr Pat Schofield, Centre of Advanced Studies in Nursing, Department of General Practice & Primary Care, University of Aberdeen, Foresterhill Health Centre, Westburn Road, Aberdeen, AB25 2AY, UK
Tel: +44 1224 554854; e-mail: p.a.schofield@abdn.ac.uk

Current Opinion in Supportive and Palliative Care 2008, 2:128–132

Purpose of review

The purpose of this paper is to consolidate the literature around pain assessment and management in older adults with dementia and to make recommendations for future research and practice developments. This review is provided following the introduction of guidelines for the assessment of pain that were published last year.

Recent findings

The key issues that have been identified from the literature and will be discussed in this paper are assessment, pharmacotherapy, complementary therapies, education and guidelines.

Summary

Pain in older adults has received increasing attention within the literature during the last decade, and in the past 12 months, there have been a number of papers published that highlight several key issues in the area. In terms of pharmacology and complementary therapies, there is still a need to evaluate their use in older adults in general. We have seen guidelines introduced and we need to consider how well these are being implemented. However, most importantly, we are now seeing increasing evidence supporting the use of three behavioural pain assessment scales, which look promising for the future.

Keywords

assessment, dementia, management, pain

Curr Opin Support Palliat Care 2:128–132

1751-4258
of pain scales designed to measure pain in this group

Introduction

specifically [4–13]. In total, there were 12 behavioural

Since the International Year Against Pain in Older Adults pain assessment papers all of which had identified a pain
[1], we have seen increasing interest in dealing with pain measure for use within their own practice setting. Never-

in the older population in general and a small level of theless, a few looked at validating their scale in other
interest around older adults with cognitive impairments. settings. This clearly shows that there has been interest in
There are three key issues that really need to be measuring the pain experience of the older adult with

addressed with this group; these are, attitudes towards cognitive impairment. In terms of pharmacological inter-

the older adult in pain, assessment of pain whereby ventions, many of the studies reviewed tended to high-
traditional approaches cannot be utilized, and manage-light poor use of regular analgesia prescribing in this
ment whereby pharmacological interventions may be group [14–17]. In fact, in many of the studies it appeared
limited. Any developments in each of these key areas that people with dementia were not on any pain relief.

will be discussed.

Finally, there were a small number of studies that looked
at self-management and complementary therapies but
again these excluded people with cognitive impairment.

An annotated bibliography

An annotated bibliography developed back in 2005 identified 136 papers related to pain in the older age group A systematic review
during a period of 10 years (1995–2005) and covered areas The systematic review conducted 1 year later focused
including socio-economic prevalence, attitudes, assess-specifically upon adults living in care homes. Again
ment, experiences and management [2,3]. Most of the assessment scales were a feature of this review [18,19]
authors of the papers identified at the time tended to with pharmacological interventions continuing to be used
avoid including adults with dementia in their studies with less [20,21] and although there were papers evaluating
the exception of papers demonstrating the development approaches such as CBT [22] and relaxation [23], these

1751-4258 . 2008 Wolters Kluwer Health | Lippincott Williams & Wilkins

approaches were not used with the cognitively impaired. Guidelines and education were also recommended within the literature [24] at that time.

Update of progress

What is happening in the literature 1 year on? Have there been any major developments in the field since the end of the year against pain in older adults? A further review of the literature recently has identified 26 papers (2007–2008). The themes within the papers do not appear to have changed very much with most of the work around assessment and a few papers on quality, nursing home care and pharmacological interventions.

In terms of prevalence, the literature has been highly variable ranging from 49 to 83% of the residents being in pain [25], and there has been much discussion around issues of identifying and reporting pain associated with increased levels of cognitive impairment. This is to say that with increasing cognitive impairment, residents are less likely to report pain, and staff are less likely to identify and treat pain. Thus, pain in this group goes untreated. There have been two papers recently, which add to our knowledge in this area. One study [26] carried out in three nursing homes in Singapore identified that there were no differences in pain reports associated with level of cognition. As such, pain prevalence was not influenced by cognitive impairment, but chronicity and characteristics of pain are influenced by level of cognition with more acute pain being observed in the moderate to severely cognitively impaired group pain in this group was more constant. A second study [27] conducted in Finland sought to examine the belief that chronic pain impacted significantly upon nursing home residents' activities of daily living. These authors found that pain did not impact upon activities of daily livings (ADLs), thus challenging previous evidence. The numbers in this study were, however, very small (n ¼41) and the intensity of pain was low. It seems, in the past 12 months there has been a decrease in studies that seek to highlight the

incidence of pain in nursing homes.

The earlier reviews demonstrated that there had been many behavioural assessment tools developed in recent years and we recommended that there was an urgent need to validate tools in more than one setting to enable recognition of a consistently effective behavioural measure that could be used, for example, across one country and perhaps even internationally. The nearest tool to achieving these criteria has been the Doloplus scale [13]. This scale, developed in Europe, has now been translated into five languages for cross-cultural use [28]. The current review has identified a further two pain assessment tools that have been developed in spite of recommendations that no more should be developed. The Certified Nursing AssistantPain

Assessment Tool (CPAT) [29] is a behavioural tool that has been developed recently for use by nursing assistants and Mobilization-Observation-Behavior-Intensity-Dementia (MOBID) Pain Scale has been developed for use in care homes [30]. Both authors identify limitations and recommend further work to be done to validate the tools. It is a shame that one of the other predeveloped tools had not been validated further instead.

There has been work, however, validating the Pain Assessment in Advanced Dementia (PAINAD) scale in Germany [31] and this does support the original work further suggesting that the PAINAD does show good reliability and is a useful measure of pain in people with dementia (n ¼99). The scale that was originally developed from the DisDAT scale has also been evaluated in Australia [32] and the team there reported then that it was a good indicator of the probability of pain and subsequently they have incorporated it into the Australian Pain Society [33] guidelines for the management of pain in residential care. The other scale that has received further evaluation is the Neonatal Outcome and Prolonged Analgesia in Neonates (NOPAIN) scale. Popp and Portenoy [34] have recently completed an evaluation getting a new set of raters to view the original video footage from the parent study and rate the pain observed using the NOPAIN scale. The results of this study reinforce the original promising results thus supporting the reliability and validity of the scale. There have been further studies evaluating the Doloplus scale, which also seems to be gaining evidence as to its success as a potential pain measure. Thus, Doloplus, NOPAIN and

PAINAD seem to be gaining evidence to support their use as an appropriate measure of pain in adults with dementia.

One of the main controversial issues in dealing with older adults has always been the use of pharmacological interventions to manage pain and the concerns expressed regarding the use of strong analgesics and of course the NSAIDs. Pharmacotherapy in the older person is complicated by the risk of adverse drug reactions in this population, which is two to three times higher than in younger age groups [21]. For example nonsteroidal drugs are reported to cause a greater risk of gastric ulceration in the older age group [35,36] and compliance being another factor, which has been highlighted as low as 25–50% [37]. Whether this all contributes to the fear of prescribing in older persons' group or due to the inability to determine the presence of pain as a result of the lack of consistency in behavioural scales noted in the past is unclear.

The most recent review of the literature has only highlighted two papers related to pharmacology. A large retrospective analysis carried out in the United States by Razaq et al. [38] sought to examine the factors that

influenced the use of short acting opioids, local anaesthetic opioids and transdermal fentanyl (TDF). The investigators found that TDF was more likely to be used in older aged adults, those living in nursing homes and those with dementia. They, however, recommend that further research needs to be conducted to determine the factors that influence these decisions and this is something that could be explored using qualitative methodology.

The second paper in this section presented a case study and discussed the potential options of morphine or hydromorphone for the management of pain. This paper raises issues around hepatic and renal failure as opposed to ageing or dementia [39]. It is quite surprising that there are so few papers in this section in the light of much of the recent adverse publicity around the use of drugs in the older population. Ross and Crook [40] further suggest that management of pain in this group should focus upon the use of a combination of pharmacological and nonpharmacological approaches. Such approaches can enhance quality of life. A philosophy that is reinforced in study by Sansone and Schmitt [41] demonstrates the impact of pain upon care home residents in terms of mood, sleep disturbance and function and makes recommendations for the contribution that can be made by nurses in the assessment and treatment of pain in this setting.

Adjuvant therapies

Complementary therapies are becoming increasingly popular within healthcare and within pain management. The rationale is that the therapies provide adjuvant care and the increasing emphasis on a more holistic perspective to care is enhancing their popularity. The previous systematic review identified a number of papers that had evaluated complementary therapies in the nursing home setting. The range of therapies used included; relaxation, biofeedback, aromatherapy and Qi therapy. The investigators in these studies included residents with cognitive impairment and reported very positive findings in terms of staff/resident relationships and reducing agitation in the residents who participated in these strategies. Some of the papers presented some really moving accounts of family experiences associated with tender touch [41] and these positive benefits were reinforced by staff who also felt the approach easy to use. Although all of the studies reported that they included residents with dementia, only

one study reported the level of dementia recorded and all of the studies were able to obtain informed consent thus suggesting that the level of dementia was mild to moderate. This does therefore exclude a larger number of residents within care homes as many have moderate-tosevere dementia and so does not really reflect the care home population in the United Kingdom. The recent review of the literature has not identified any studies carried out since these early reports, which is a real pity in

view of the promising results found by the authors. Clearly, there is potential for more research into adjuvant or complementary pain management strategies in the care home setting.

Education/guidelines

Three studies had been previously identified that explored the concept of improving education of care home staff and introducing pain management guidelines. All three studies gave positive reports of the impact of such approaches and made recommendations on how this could be taken forward. Again, the studies were presented between the years 2000 and 2004 and there is no evidence of them being taken forward. So again this is an area whereby further work needs to be carried out.

Recommendations: research

So what are the conclusions that can be made from our updated review of the literature around assessment and management of pain in adults with dementia? There has been quite a lot of research in this area over the last decade. There are a number of pain assessment tools that seem to be developing an increasing evidence base to support their use. The PAINAD, NOPAIN and Doloplus scale currently have the most evidence supporting their use from an international perspective. It is interesting though, that none of the work has been carried out in the United Kingdom! So it is clearly time for a large scale UK evaluation of these scales to be conducted to determine best practice for the UK care home setting. Pharmacological treatment of pain is an integral component of any pain management regime regardless of care setting and it is probably one of the key approaches to be used when

some of the nonpharmacological approaches cannot be used due to inability to determine consent. The guiding rule is to ‘start low and go slow’ thus determining the impact of particular drugs. Effective guidance and education must be in place to ensure that such approaches are applied safely and monitored continuously. More research is needed to evaluate the impact of specific drugs such as opioids on individuals with dementia. Clearly, complementary therapies provide suitable adjuvants for many traditional pain therapies and there is a place for these approaches in the care home setting. Of course, the difficulties are associated with consent with this group. However, cognitive impairment must not exclude people from participating in research. Increasingly, we are seeing the introduction of guidelines for practice such as the British Pain Society/British Geriatric Society guidelines on assessment (http://www.bgs.org.uk/Publications/Publication%20Downloads/Sep2007PainAssessment.pdf) [42]. However, we need to explore ways of ensuring that the guidelines are put into practice, evaluated and most importantly to support staff to take them on board.

Practice

Care homes in the United Kingdom contain some of our most vulnerable adults. However, most care homes are like many healthcare settings, understaffed and certainly the staff who work there are underpaid for the demands of the role. There are many demands upon their time and educational needs, so pain becomes one of a number of key issues that require education and support to improve care. How can care home staff improve pain management if we the researchers have not yet provided them with an effective tool to determine the existence of pain in this group of residents? Guidelines for practice are an important step in this process but we cannot simply throw these guidelines at already under-resourced areas and expect to empower staff to take the recommendations on board. Such guidelines must be supported with appropriate training and we need to demonstrate that introducing such guidelines actually makes a difference in practice and does not become a paper exercise.

Another key area for both practice and research is the role of family carers. This is an area that has received very little interest in the research and a recent study [43] has demonstrated that it also appears to receive little attention by staff. Relatives of residents with dementia can provide a valuable resource in determining the presence of pain and to identify the preferred strategies for management that were used prior to admission. Carer perspectives need to be acknowledged in both research and practice.

Conclusion

From this updated review there are several recommendations that can be made in this area. We need to look carefully at the pain assessment tools that currently exist and conduct further validation studies to support one or two of the most appropriate tools, such as PAINAD, NOPAIN or Doloplus, which appear to have the most evidence so far, rather than creating more. More studies looking at the use of pharmacological interventions need to be carried out and there is also a need to look at the potential for the use of complementary therapies with this group as approaches that could be incorporated into the everyday practice of care home staff.

References and recommended reading

Papers of particular interest, published within the annual period of review, have been highlighted as:

. of special interest
. of outstanding interest
Additional references related to this topic can also be found in the Current World Literature section in this issue (p. 151).

1 International Year Against Pain in Older Adults (EFIC) 2006–2007. http://www.efic.org/.

2 Schofield PA, Clarke A, Faulkner M, et al. An annotated bibliography for the management of pain in the older adult. University of Sheffield; 2005. ISBN 1-902411-40-4.

Dealing with pain in older adults with dementia Schofield 131

3 Schofield PA, Reid D. The assessment and management of pain in older people: a systematic review of the literature. Int J Disabil Hum Dev 2006; 5:9–

15.
4 Abbey J, Piller N, De Bellis A, et al. The Abbey Pain Scale: a one minute indicator for people with end stage dementia. Int J Palliat Nurs 2004; 10:6–

13.
5 Fisher-Morris M, Gellatly A. The experience and expression of pain in Alzheimer patients. Age Ageing 1997; 26:497–500.

6 Gloth FM, Scheve MS, Stober BS, et al. The functional pain scale: reliability, validity and responsiveness in an elderly population. Am Med Directors Assoc 2002; 2:110–114.

7 Hurley AC, Volicer BJ, Hanrahan PA, et al. Assessment of discomfort in advanced Alzheimer patients. Res Nurs Health 1992; 15:369–377.

8 Manz BD, Mosier R, Nusser-Gerlach MA, et al. Pain assessment in the cognitively impaired and unimpaired elderly. Pain Manag Nurs 2000; 1:106–115.

9 Scherder E, Bouma A, Slaets J, et al. Repeated pain assessment in Alzheimer's disease. Dement Geriatr Cogn Disord 2001; 12:400–407.

10 Simons W, Malabar R. Assessing pain in elderly patients who cannot respond verbally. J Adv Nurs 1995; 22:663–669.

11 Stolee P, Hillier L, Esbaugh J, et al. Instruments for the assessment of pain in older persons with cognitive impairment. J Am Geriatr Soc 2005; 53:319–

326.
12 Warden V, Hurley A, Volicer L. Development and psychosomatic evaluation of the Pain Assessment in Advanced Dementia (PAINAD) scale. J Am Med Directors Assoc 2003; 4:9–15.

13 Wary B, Filbet M, Villard JF, et al. Using Doloplus with nonverbal cognitively impaired elderly patients. 2004. http://www.doloplus.com. [Accessed on 25 May 2005].

14 Hall-Lord ML, Larsson G, Steen B. Chronic pain and distress among elderly in the community: comparison of patients' experiences with enrolled nurses' assessments. J Nurs Manag 1999; 7:45–54.

15 Horgas AL, Tsai P. Analgesic drug prescription and use in cognitively impaired nursing home residents. Nur Res 1998; 47:235–242.

16 Landi F, Onder G, Cesari M, et al. Pain management in frail, community-living elderly patients. Arch Intern Med 2001; 161:2721–2724.

17 Won A, Lapane K, Gambassi G, et al. Correlates and management of nonmalignant pain in the nursing home. J Am Geriatr Soc 1999; 47:936–

942.
18 Cohen-Mansfield J, Lipson S. Pain in cognitively impaired nursing home residents: how well are physicians diagnosing it? J Am Geriatr Soc 2002; 50:1039–1044.

19 Fuchs-Lacelle S, Hadjistavropoulis T. Development and preliminary validation of the pain assessment checklist for seniors with limited ability to communicate (PACSLAC). Pain Manag Nurs 2004; 5:1–19.

20 Portenoy RK. Management of chronic pain in the elderly: pharmacology of opioids and other analgesic drugs. In: Ferrell BA, Ferrell BR, editors. Pain in the elderly. Seattle: IASP Press; 1996. pp. 21–34.

21 Weinblatt ME. Nonsteroidal anti-inflammatory drug toxicity: increased risk in the elderly. Scand J Rheumatol 1991; 91:9–17.

22 Cook A. Cognitive–behavioural pain management for elderly nursing home

residents [doctoral thesis]. University of Manitoba; 1995.

23 McBee L, Westreich L, Likourezos A. A Psychoeducational Relaxation Group for pain and stress management in the nursing home. J Social Work Long Term Care 2004; 3:15–28.

24 Resnick B, Quinn C, Baxter S. Testing the feasibility of implementation of clinical practice guidelines in long-term care facilities. J Am Med Directors Assoc 2004; 5:1–8.

25 Fox PL, Raina P, Jadad AR. Prevalence and treatment of pain in older adults in nursing homes and other long term care institutions: a systematic review. Can Med Assoc J 1999; 160:329–333.

26 Leong LY-O, Nuo TH. Prevalence of pain in nursing home residents with

. different cognitive and communicative abilities. Clin J Pain 2007; 23:119–127.
An interesting study from Singapore investigating pain in three nursing homes, which shows that prevalence does not decrease with cognitive impairment, but acute pain does increase with more severe cognitive impairment.
27 Kaupila T, Pesonen A, Tarkkila P, Rosenberg P. Cognitive dysfunction and depression may decrease activities in daily life more strongly than pain in

. community-dwelling elderly adults living with persistent pain. Pain Pract 2007; 7:241–247.
An interesting study from Finland that demonstrates chronic pain does not reduce daily activities in nursing home residents. Although, the residents had a low pain intensity rating.

132 Pain: nonmalignant disease

28 Pautex S, Hermann F, Michon A, et al. Psychometric properties of the Doloplus-2 observational pain assessment scale and comparison to self

assessment in hospitalised elderly. Clin J Pain 2007; 23:774–779.
A really interesting prospective clinical study of hospitalized older patients, which further supports the Doloplus-2 scale as being an appropriate behavioural scale that can be used to determine the presence of pain in cognitively impaired older adults. Also reinforces the work that shows doctors and nurses tend to underestimate pain.
29 Cervo FA, Raggi RP, Bright-Long LE, et al. Use of the certified nursing assistant pain assessment tool (CPAT) in nursing home residents with dementia. Am J Alzheimers Dis Other Demen 2007; 22:112–119.

30 Husebo BS, Strand LI, Moe-Nilssen R, et al. Mobilization-Observation-Behavior-Intensity-Dementia Pain Scale (MOBID): development and validation of a nurse-administered pain assessment tool for use in dementia. J Pain Symptom Manag 2007; 34:67–80.

31 Schular MS, Becker S, Kaspar R, et al. Psychometric properties of the

. German (Pain Assessment in Advanced Dementia Scale (PAINAD-G) in nursing home residents. J Am Med Directors Assoc 2007; 8:388–395.
An excellent study from Germany, which reinforces the effectiveness of the PAINAD scale as a measure of pain in nursing home residents with dementia.

32 Abbey J. Putting pain scales to the test. Aust Nurs J 2007; 14:43.

33 AustralianPainSociety.Guidelinesforthemanagementofpaininresidentialcare. (http://www.apsoc.org.au/owner/files/9e2c2n.pdf). [Accessed 7 February 2008].

34 Popp B, Portenoy RK. Management of chronic pain in the elderly: pharmacology of opioids and other analgesic drugs. 1996. In: Ferrell B, Ferrell BA, editors. Pain in the elderly. A report of the Task Force on Pain in the Elderly of the International Association for the Study of Pain. Seattle: IASP Press; 1996. pp. 21–34

35 Loeb DS, Ahlquist DA, Talley NJ. Management of gastroduodenopathy associated with the use of nonsteroidal anti-inflammatory drugs. Mayo Clinic 1992; 67:354–364.

36 Morrow D, Leirer V, Sheikh J. Adherence and medication instructions: review and recommendations. J Am Geriatr Soc 1988; 36:1147–1160.

37 Rigler SK, Shireman TI, Kallenbach L. Predictors of long-acting opioid use and oral versus transdermal route among older Medicaid beneficiaries. Am J Geriatr Pharmacother 2007; 5:91–99.

38 Razaq M, Balicas M, Mankan N. Use of hydromorphone (Dilaudid) and morphine for patients with hepatic and renal impairment. Am J Ther 2007; 14:414–416.

39 Ferrell BA, Ferrell BR, Rivera L. Pain in cognitively impaired nursing home patients. J Pain Symptom Manag 1995; 10:591–598.

40 Ross M, Crook J. Elderly recipients of nursing home services: pain disability and functional competence. J Adv Nurs 1998; 27:1117–1126.

41 Sansone P, Schmitt L. Providing tender touch massage to elderly nursing home residents: a demonstration project. Geriatr Nurs 2000; 21:303–

308.
42 British Pain Society/British Geriatric Society guidelines on assessment. http://www.bgs.org.uk/Publications/Publication%20Downloads/Sep2007 PainAssessment.pdf. [Accessed 22 April 2008].

43 Buffum MD, Haberfelde M. Moving to new settings: pilot study of families' perceptions of professional caregivers' pain management in persons with

dementia. J Rehabil Re Dev 2007; 44:295–304.
This is an excellent study that surveys family caregivers for their perceptions of pain management within care homes. This is unusual as it is one of the first studies to explore the beliefs of family carers and although a pilot, it does show how important these perspectives are.