

## Experience of registered nurses in assessing postoperative pain in hip fracture patients with dementia

Ferid Krupić<sup>1,2</sup>, Sahmir Sadić<sup>3</sup>, Nail Seffo<sup>2</sup>, Mirza Bišćević<sup>4</sup>, Mirsad Fazlić<sup>3</sup>, Svemir Čustović<sup>3</sup>, Kristian Samuelsson<sup>1,2</sup>

<sup>1</sup>Department of Orthopaedics, Institute of Clinical Sciences, The Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden,

<sup>2</sup>Department of Orthopaedics, Sahlgrenska University Hospital, Mölndal, Sweden, <sup>3</sup>Clinic for Orthopaedics and Traumatology, University Clinical Centre Tuzla, Tuzla, Bosnia and Herzegovina, <sup>4</sup>Department of Orthopaedics and Traumatology, Clinical Centre, University of Sarajevo, Bosnia and Herzegovina

### ABSTRACT

**Aim** To explore the experience of registered nurses in assessing pain in hip fracture in patients with dementia in the postoperative setting.

**Methods** The study questionnaire contained 23 items mainly addressing demographic and social data, information about communication and pain assessment, attention and awareness of the health-care professionals on the ward and suggestions for improving nursing.

**Results** The nurses claimed that they began their assessment of pain in patients with dementia first by observing the patient and making a visual assessment of pain, after which they began to communicate with these patients; majority of dementia patients with hip fractures displayed more facial expressions of pain than patients without dementia. All the nurses agreed that the more severe the patient's dementia was, the less clear the facial expressions and that this in turn made it difficult for the nurses to take care of such patients. Body language was the most common way the patients with dementia and hip fractures expressed their pain. Assessing the pain of a dementia patient with hip fracture and interpreting a non-verbally communicative patient was experienced as very difficult by all the nurses.

**Conclusion** The nurses found that the fact that they had not attended any courses on dementia and pain assessment in those patients made their work more difficult; they need to know more and to have more information about those patients and their needs for a more comprehensive exchange of information between the hospital wards and the patients' care homes.

**Key words:** dementia disease, hip fracture, pain assessment, registered nurses, qualitative research

### Corresponding author:

Ferid Krupić

Department of Orthopaedics, Institute of Clinical Sciences, Sahlgrenska Academy, University of Gothenburg, Göteborgsvägen 31, 431 80 Mölndal, Sweden

Phone: +46 31 342 82 42;

Fax: +46 (0)31 878531;

E-mail: ferid.krupic@gu.se

ORCID ID: [www.orcid.org/0000-0001-7082-3414](http://www.orcid.org/0000-0001-7082-3414)

### Original submission:

08 December 2017;

### Revised submission:

09 January 2018;

### Accepted:

10 January 2018.

doi: 10.17392/942-18

## INTRODUCTION

It has been shown many times in detail that patients suffering from cognitive deficiency, such as dementia, fail to report pain as often as healthy people (1,2). As a result, many studies have reported on a number of occasions that pain medication is prescribed far less often for dementia patients (3,4). Recent studies have shown that the fact that dementia patients do not mention pain as often and are less frequently prescribed pain medication does not mean that they suffer less pain. It is instead due to the fact that they do not communicate well verbally (5). About 180,000 people in Sweden are affected by some form of dementia and some 24,000 more are affected every year. Moreover, almost 18,000 people suffer a hip fracture every year. The cost of their treatment amounts to Swedish Kronas 1.5 million every year (6). The incidence of hip fractures in dementia patients is rising (7). Unfortunately, dementia patients are more likely to suffer a fatal outcome than others and many who do recover physically never regain their previous mental and physical capacities. They are often weak and vulnerable and special care is required to provide support on an individual basis according to their needs (8). Health-care professionals have to evaluate the patient's pain level and do what they can to ensure the patient is comfortable. In doing this, they have to rely on their training and evaluating pain in dementia patients is notoriously difficult since these patients frequently do not express how they feel (9,10).

It has been shown, both in Sweden and elsewhere, that carers are often under a great deal of stress due to time constraints and workload, when working with these patients both in care homes (11,12) and in hospital (13,14). A large number of health-care professionals is included in the evaluation and management of pain in orthopaedics and each one plays a different role. Medication is usually prescribed by doctors, but the nurses are mainly responsible for evaluating and administering medication, as well as assessing post-surgical pain levels (15,16). Nurses should have necessary professional skills and knowledge, based on the requirements of the Social Board (Swedish Board of Health and Welfare) (17) to provide care on the basis of observation, evaluation, planning, practice and the assessment of their patients' requirements. Treating postoperative pain

in dementia patients is extremely complex, since communication with patients is founded on their ability to express their needs (18).

The aim of this study was to explore the experience of registered nurses in assessing pain in hip fracture patients with dementia in the postoperative setting.

## PARTICIPANS AND METHODS

### Participants and study design

The study was designed as a qualitative study using data from a self-reported questionnaire form. One to four weeks before the operation patients scheduled for Total Hip Replacement (THR) visited outpatient Department of Orthopaedics at Sahlgrenska University Hospital in Gothenburg, Sweden in order to prepare for surgery. The patients met an orthopaedic (usually the operating) surgeon, an anaesthesiologist, a physical therapist and a contact nurse. At this visit, patients were examined and provided with further information about the type of anaesthesia, surgical procedure and rehabilitation following surgery. The dementia patients instead visit the geriatric ward where they met all the professionals who were prepared them for surgery. The same day or the day after the patients underwent the surgical procedure and sent again to one of the geriatric wards at the hospital. The study was conducted at three geriatric wards at the Department of Orthopaedic Surgery at one of the largest hospitals in Western Sweden. The nurses with at least five-year experience of fracture patients with dementia were asked to take part in the study, because those who had worked for at least five years would have had more opportunity to meet patients with dementia. The questionnaire was sent to 60 registered nurses and 51 (85%) returned the completed questionnaires. Their age varied between 35 and 55 (median 40) and they had worked as registered nurses for between six and 28 years (median 15 years).

### Methods

The data were collected between August 2016 and June 2017 by the first author through a self-administered questionnaire. The study questionnaire contained 23 items addressing demographic and social data: age, gender (m/f), educational level and years of experiences as a

registered nurse and candidate examination (yes/no) (Table 1). Information about communication and pain assessment (*Please describe your encounters with hip fracture patients with dementia in the postoperative setting. How do you communicate with those patients? How do you assess their pain?*), attention and awareness of the health-care professionals on the ward (*What do you do if you have any questions about those patients?*) and suggestions for improving nursing (*What do you do to make any changes at the ward?*). For the purpose of the present study all 23 questions were analysed.

**Table 1. Characteristics of 51 participants in terms of educational level, work and years of experience**

Characteristics	No (%) of nurses
<b>Gender</b>	
Male	15 (29)
Female	36 (71)
<b>Total</b>	<b>51</b>
<b>Educational level</b>	
Registered nurses	51 (100)
Kandidate examination	12 (23)
Master's	7 (14)
<b>Total</b>	<b>51</b>
<b>Dementia courses taken</b>	
Total	0
<b>Age</b>	
≤30 years	13 (25)
31-40 years	9 (18)
41-50 years	18 (35)
≥60 years	11 (22)
<b>Total</b>	<b>51</b>
<b>Experience as registered nurses</b>	
≤5 years	8 (16)
6-10 years	12 (23)
11-15 years	22 (43)
16-20 years	6 (12)
≥20 years	3 (6)
<b>Total</b>	<b>51</b>

**Statistical analysis**

A qualitative content analysis method in accordance with Graneheim and Lundman (19) was chosen for the analysis and interpretation of the data. This method is capable of condensing a large amount of data into a limited number of themes, categories, subcategories and codes. The analysis of the data was performed primarily at manifest level, however, since a latent analysis is also part of this method, the analysis may contain both manifest and latent information.

**RESULTS**

The analysis of the self-administered questionnaire resulted in two main categories and seven

subcategories depending on how the participants described their situation when assessing postoperative pain in hip fracture patients with dementia (Table 2).

**Table 2. Overview of the categories and subcategories**

Categories	Subcategories	Theme
Visual assessment of pain	Facial expression	Assessing postoperative pain in hip fracture patients with dementia – a complex issue
	Body language	
	Behavioural changes	
Communication	Being informed about dementia patients	
	Communication about pain	
	Reporting pain	
	Suggestions for improvements	

**Visual assessment of pain**

The nurses in this study claimed that they had begun their assessment of pain in patients with dementia first by observing a patient and making visual assessment of pain, after which they began to communicate with those patients. In terms of the visual assessment of pain, the nurses first “scanned” the entire patient, after which they based their assessment on the patients’ facial expressions, body language and behavioural changes.

**Facial expression.** The nurses claimed that the majority of dementia patients with hip fractures displayed more facial expressions of pain than patients without dementia. All nurses agreed that more severe the patient’s dementia was, the less clear the facial expressions, and this in turn made it difficult for the nurses to take care of such patients. Some nurses also mentioned mouth grimaces and bodily restlessness as common signs that the patients were experiencing pain. Other nurses described a variety of other facial expressions that indicated that the patients were experiencing pain. Facial wrinkles, wrinkling the face, different changes in the eyes and grimaces were just some of the signs when patients were in pain.

*I look at the patient first, assess his/her pain and then I start communication with them. If they are sad, nervous and do not want to communicate, they are in pain definitely.*

**Body language.** According to all nurses, body language was the most common way patients with dementia and hip fractures expressed their pain: the patients showed their pain by a lack of verbal expression, but with facial expressions, body language and mood changes. All nurses re-

ported that patients with dementia and hip fractures changed their posture more often than patients without dementia. Looking, listening and discerning were the three most common ways of detecting pain in patients with dementia.

*Usually, there is no point in communicating with these patients. I always first look at their body language because this tells me a lot.*

**Behavioural changes.** Assessing the pain of a dementia patient with hip fracture and interpreting a verbally uncommunicative patient was experienced as very difficult by all nurses. However, they all found that altered behaviour in these patients was a common signal of the fact that they were experiencing negative emotions and/or pain. Nurses who knew the patient prior to surgery reported that this was not a problem for them, but nurses who did not know the patient and/or only met the patient postoperatively had more trouble assessing pain. A tense body and the need for more sleeping, avoiding other patients, being quieter and more introverted than before, were described by the majority of nurses as behavioural changes in these patients when they reach the ward postoperatively. Aggressive and uncooperative behaviour, being impatient, easily irritated, having difficulty sleeping, increased sensitivity to noise, light and physical touch were mentioned by the majority of nurses as other signs of behavioural changes in these patients.

*I sent a patient to surgery ... the next day I met him again, he was changed and a completely different person.*

### **Communication**

There was disagreement between the nurses about communicating with dementia patients. Some communicated with patients normally but use simpler language; others talk to them as dementia patients who did not understand anything. All those who took part, however, found communication with these patients very problematic and challenging. They also mentioned that dementia patients were normally very "sweet" and compliant, but they may sometimes be belligerent, angry and unhappy. It is necessary to obtain a better understanding of dementia and the way it affects caring for patients after surgery.

**Being informed about dementia patients.** Despite the fact that all those involved in the study believed that they could do their jobs much more effectively if they were better informed about dementia, none of them had ever taken part in any course or training on dementia. There was also a lack of sharing information, patient records, from the place where the patients come to the hospital and even between departments within the hospital. Very frequently, the only exchange of information occurred between nurses in a short oral report. This is inadequate and more information is needed.

*Our knowledge of these patients is very poor; because we have not attended any courses on dementia, we cannot get any information from the patients because they have dementia, the only thing that can help us is the brief report from our colleagues.*

**Communication about pain.** In the present study, the nurses mentioned that holding the patients hands and stroking them, and then beginning to talk gently about their pain was the way their communication began. They also mentioned that they used simple language and tried to be gentle and pay attention to the patient's reaction. Most of them stated that they felt they could identify with the patient pain. Nevertheless, there was very often no response from the patient.

*Communication in terms of pain with these patients can be either verbal or non-verbal, and in the end there was no communication at all.*

**Reporting pain.** Although most nurses said they were aware that it was extremely difficult to communicate with these patients, they were persistent in trying to make them more at ease and feel welcome on the ward. When there was a lack of information, they resorted to other means such as contacting staff working on the ward or in the care home where the patient came from, studying the patient's medical history and talking to the patient's family, if they were available. The lack of information was again pointed out along with no coordination between the care home and the hospital wards.

*Guided by many years of experience, I know that communication with these patients is impossible, so I read the papers that follow the patient after surgery.*

**Suggestions for improvements.** The nurses made several suggestions about how communi-

cation and the evaluation of pain can be improved in dementia patients with hip fractures. It is necessary for nurses to know and understand more about dementia itself in order to ensure better cooperation between hospital and other medical staff. None of these informants had ever attended a course on dementia, but they all wanted to do so. Some felt a course would help them to see if they had been doing things correctly over the years and to see the advances that have taken place in the care of dementia patients with hip fractures.

*I think our employer must make sure that we provide adequate, quality care for such type of patients, but this is currently impossible because none of us have attended or completed any courses on dementia.*

## DISCUSSION

The present study is the first in Western Sweden investigating the relationship between registered nurses' attitudes, in the assessment of pain and communication in patients with hip fractures and dementia, and various factors that affect their views of this issue. The results reveal several of the nurses' characteristics and factors that influence their assessment of pain on the postoperative ward in patients with dementia. The results of the present study showed that nurses first assess the pain visually and then communicate with the patients with dementia, if possible. The first assessment was based on facial expressions, body language and behavioural changes. All of them found that facial expressions were helpful in assessing pain in patients both with and without dementia. Various grimaces and patient's eyes were other ways of assessing pain in contrast to a study by Manfredi, 2003 (20), which points out that pain intensity cannot be measured by facial expressions in patients with dementia. The nurses in the present study who had met the patients prior to surgery pointed out that body language plays a part in assessing pain. Those who had known the patients for longer found it easier to assess pain than those who had just met the patient for the first time. The continuity of the personnel group around dementia patients is therefore important to facilitate the assessment of pain. Knowing patients with dementia for a longer period of time is also important to be able

to interpret changes in patient behaviour, which may indicate pain (13). In the present study, we have shown that, without a course on dementia, the nurses found it difficult to do their work well. It is necessary to create a calm, safe environment, so that patients with dementia with hip fractures feel better on the postoperative ward. All those who participated in this study mentioned that they received scant information about the patients and they did not know about them until they arrived on their ward. Other studies have also shown that it is important to be caring and to evaluate behaviour when dealing with patients with dementia, but it is difficult to do this. It is necessary to increase the understanding of dementia and the ability to treat patients, especially among nurses who have recently begun work (21). The lack of information and understanding makes it very difficult to communicate with dementia patients, particularly if healthcare professionals are not trained to help them. Everyone agreed that receiving information in good time makes it much easier to communicate with patients and to give them the care they need (13). The first encounter with patients is also very important so that good communication is continuous. Cooperation and communication are extremely important when working with patients, as it has been shown by this study and many others (13, 22-24). Lack of communication is frustrating for all those involved. The nurses in the present study had a variety of means of communicating with these patients: some behaved as they would with any other patients, some talked using simple language and some communicated with them knowing they had dementia and were not able to understand. This is probably because they did not have any knowledge of the patients to begin with and none of them had taken any courses on dementia. In conclusion, this study shows that it is very important to evaluate pain and communicate with patients with dementia suffering from hip fractures, but this is a complex issue. It begins with a visual evaluation and the nurses use various forms of communication. Some communicate with patients as usual but with short sentences and simpler language, while other respondents communicate with these patients as patients who have dementia and do not understand anything. The nurses found that the fact that they had not attended any courses on dementia and pain assessment in the-



se patients made their work more difficult. They need to know more and have more information about these patients and their needs in order to ensure more comprehensive exchange of information between the hospital wards and the patients' care homes.

## REFERENCES

1. Mantyselka P, Hartikainen S, Louhivuori-Laako K, Sulkava R. Effects of dementia on perceived daily pain in home-dwelling older adults: a population based study. *Age Ageing* 2004; 33:496-9.
2. Parmelee PA, Smith B, Katz IR. Pain complaints and cognitive status among elderly institution residents. *J Am Geriatr Soc* 1993; 41:517-22.
3. Pickering G, Jourdan D, Dubray C. Acute vs chronic pain treatment in Alzheimer's disease. *Eur J Pain* 2006; 10:379-84.
4. Sieber FE, Mears S, Lee H, Gottschalk A. Postoperative opioid consumption and its relationship to cognitive function in older adults with hip fracture. *J Am Geriatr Soc* 2011; 59:2256-62.
5. Scherder E, Herr KA, Pickering G, Gibson S, Benedetti F, Lautenbacher S. Pain in dementia. *Pain* 2009; 145:276-8.
6. Rikshöft. Annual report 2014 (22 October 2015) <http://www.rikshoft.se>
7. Ferri CP, Prince M, Brayne C. Global prevalence of dementia: a Delphi consensus study. *Lancet* 2005; 366:2112-17.
8. Larsson M, Rundgren A. *Geriatric Diseases*. Lund, Sweden, 2003.
9. Cohen-Mansfield J. Nursing staff members' assessments of pain in cognitively impaired Nursing Home residents. *Pain Manag Nurs* 2005; 6:68-75.
10. Cunningham C, William M, Kelly F. The assessment and management of pain in people with dementia in care homes. *Nurs Older People* 2010; 22:29-35.
11. Herdman AM, Strömberg L, Grafström M, Heikkilä K. Hip fracture patients' cognitive state affects family members' experiences – a diary study of the hip fracture recovery. *Scand J Caring Sci* 2011; 25:451-8.
12. Clark L, Fink R, Pennington K, Jones K. Nurses' reflections on pain management in a nursing home setting. *Pain Manag Nurs* 2006; 7:71-7.
13. Krupić F, Eisler T, Sköldenberg O, Fatahi N. Experience of anaesthesia nurses of perioperative communication in hip fracture patients with dementia. *Scand J Caring Sci* 2016; 30:99-107.
14. Brorson H, Plymoth H, Örmon K, Bolmsjö I. Pain relief at the end of life: nurses' experiences regarding end-of-life pain relief in patients with dementia. *Pain Manag Nurs* 2014; 15:315-23.
15. Dihle A, Helseth S, Kongsgaard UE, Paul SM, Miaskowski C. Using the American Pain Society's outcome questionnaire to evaluate the quality of postoperative pain management in a sample of Norwegian patients. *J Pain* 2006; 7:272-80.
16. Hartog CS, Rothaug J, Goettermann A, Zimmer A, Meissner W. Room for improvement: nurses' and physicians' views of a post-operative pain management program. *Acta Anaesthiol Scand* 2010; 54:277-83.
17. National Board. National Board competence description for registered nurses. (15 January 2012) <http://www.socialstyrelsen.se>.
18. Rudolfsson G. The nurse has time for me: the perioperative dialogue: from the perspective of patients. *J Adv Perioperative Care* 2003; 3:77-84.
19. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ Today* 2004; 24:105-12.
20. Manfredi PL, Breuer B, Meier DE, Libow L. Pain assessment in elderly patient with severe dementia. *J Pain Symptom Manage* 2003; 25:48-52.
21. Ashton C, Manthorpe J. The views of domestic staff and porters when supporting patients with dementia in the acute hospital: an exploratory qualitative study. *Dementia (London)* 2017; 1471301217707085.
22. Hansebo G, Kihlgren M. Carers' interactions with patients suffering from severe dementia: a difficult balance to facilitate mutual togetherness. *J Clinical Nurs* 2002; 11:225-36.
23. Miller C. Communication difficulties in hospitalized older adults with dementia. *Am J Nurs* 2008; 108:58-66.
24. Long A, Slevin E. Living with dementia: communicating with an older person and her family. *Nurs Ethics* 1999; 6:23-36.

## FUNDING

No specific funding was received for this study.

## TRANSPARENCY DECLARATIONS

Competing interest: none to declare.