Sense of coherence, quality of life, and function among elderly hip fracture patients

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ABSTRACT. The aim was to study whether sense of coherence (SOC) had any predictive power in patients with hip fractures regarding length of stay in hospital, state of confusion and health, functional ability, quality of life, and municipal home-help service. A total of 73 patients admitted from their own homes participated (mean age 80.4 years). The patients were followed during a 4-month period. Acute confusional state was diagnosed using a Swedish version of the NEECHAM Confusion Scale. SOC and self-rated functional health status were assessed during the hospitalization period and one month after discharge; Quality of Life Index (QLI) and instrumental daily activities (SPE) were assessed four months after discharge. Focusing on the differences in outcome between persons with a stronger vs a weaker SOC, there were few significant differences in physical status between the subgroups. However, the persons with a weaker SOC stayed longer in the hospital and reported a significantly lower score on the NEECHAM Confusion Scale, as well as more discomfort and disability symptoms related to communication, mental, and emotional status. Furthermore, these persons had less favorable scores on the overall QLI and subscales respectively, and on all subscales measuring instrumental daily activities. The persons with a weaker SOC were significantly more dependent on assistance before admission to the hospital than those with a stronger SOC. The conclusions drawn from the study indicate that persons with a stronger SOC seem to cope in a better way with their situation after a hip fracture.

INTRODUCTION

Hip fracture is a common cause of physical, psychological, and social problems in the elderly, and the number of persons who suffer a hip fracture appears to increase every year. In 1994, about 18 000 persons in Sweden were registered as having hip fractures, and the tendency points towards double this number in the year 2000 (1).

During the first four months following a hip fracture, the overall cost for hospitalization, care in an institution, and help from the municipality in the afflicted person’s own home is about 81,000 SEK (approximately 10,400 USD) per patient (2). In Swedish hospitals at present, about every fourth bed in an orthopedic department is occupied by a patient with a fractured hip (1). The risk of hip fracture is greater for women than for men, and increases with age (3). In many cases, patients develop complications, which result in prolonged hospitalization and recovery periods, and even in death (4, 5).

It would be of interest to investigate why some patients with hip fracture more easily return to their previous levels of functioning, while others have great difficulties in rehabilitation. Factors influencing the recovery process represent important considerations in predicting the outcome. This applies to both prefracture status and postoperative complications. Prefracture diminished mobility, urinary incontinence, depression, and acute confusion state influence rehabilitation in a negative way (6-8). According to Unosson et al. (9), malnourishment is also common among patients in this group, when they are admitted to an orthopedic department. Rehabilitation goals for the hip fracture patient include maintenance of independence in activities of daily living, and restoration of an acceptable quality of life (10). However, it has been estimated that many patients do not achieve their previous level of functioning within the year following their fracture (11). According to Meyers et al. (5), postoperative complications, such as development of pressure ulcers, are associated with pre-
fracture dependence and mobility.

Three factors are reported to be of great value in assessing the progress towards an early return home after surgery. These are physical fitness, ability to walk two weeks after surgery, and living with someone (11, 12). The type of fracture does not seem to significantly influence the recovery period in a long-term perspective. However, trochanteric fractures require several more days in hospital before discharge (11, 13). According to Perez (14), pre-fracture mobility is the strongest predictor of post-fracture mobility; psychosocial factors such as social support, independence in daily living, and a positive emotional status also seem to be potentially important positive factors for these patients (1, 15). As concluded by Andersson (16), for many persons a hip fracture is a serious life event, and may be experienced as a stressful situation, which can affect the rehabilitation outcome.

In our opinion, rehabilitation research has given less attention to concepts and models of a psychological or existential nature. One factor contributing to this may be the lack of generally accepted, and cross-culturally applicable measurement tools. It is possible that Antonovsky’s (17) sense of coherence (SOC) concept and scale, which is addressed in the present study, may contribute to filling this gap. Sense of coherence consists of three components: comprehensibility, manageability, and meaningfulness. Antonovsky (17) gives the following definition of SOC: “The sense of coherence is a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that: 1) the stimuli deriving from one’s internal and external environments in the course of living are structured, predictable, and explicable; 2) the resources are available to one to meet the demands posed by these stimuli; and 3) these demands are challenges, worthy of investment and engagement”. Antonovsky (17) claims that SOC develops during childhood and early adulthood, and stabilizes around the age of 30 years. He further suggests that SOC is relatively stable throughout life after the formative years. According to Lazarus (18), and Lazarus and Folkman (19), stable person-related factors, including existential beliefs, affect the meaning a person ascribes to a situation. Although not a personality trait, SOC could thus be regarded as an enduring person- and view of life-related characteristic influencing situational appraisals of meaning (20). These appraisals in turn, affect the person’s coping processes (18, 19). Several studies exploring the relationship between SOC and health have been conducted recently in various contexts.

tend to manage the stresses of life better and stay well, whereas persons with weak SOC tend to be more vulnerable to ill health (for caring-related studies, see 21-23). In a recent Swedish study, SOC had a prognostic value for the need of continued care among elderly patients clinically ready for discharge (24, 25). However, we did not find any study specifically focusing on SOC as a potential predictor of the recovery process among patients with hip fractures. The aim of this study was to explore the predictive power of SOC in patients with hip fractures in reference to length of hospital stay, pre- and postoperative state of confusion, health, functional ability, quality of life, and need for help after discharge from hospital.

SUBJECTS AND METHODS

Study group

The sample consisted of 85 patients with traumatic hip fractures admitted to the orthopedic departments (two wards) of a County hospital in a medium-sized Swedish town. The inclusion criteria for patients were: cervical or trochanteric hip fracture (including basocervical and subtrochanteric fractures); age of 60 years old or older; living in own home before admission to hospital; patients must be communicative and must give their informed consent. The patients fulfilling these inclusion criteria were selected consecutively by the ward nurses. In the analysis process, data from the patients who were operated once more (N=6), and those who had help more than four times a day from the municipal home-help service before admission (N=6) were excluded, leaving a total of 73 persons involved in the study. Because of incomplete responses, this group of patients was reduced by two on the second and third assessment occasions, and by six on the fourth occasion. The average age of the patients was 80 years (SD=8), and the range was 60-100 years. The majority (77%) of the patients were female. Four persons died before the end of the four months (see Procedure below); two of them before discharge from the emergency hospital, and two after discharge.

This study was carried out during the period February 1995 to February 1996. During this time, 32 of the patients were involved in an intervention program aimed at improving the rehabilitation process. The patients in the intervention group came from particular districts in the municipality, while the patients in the control group were living in other districts. The intervention group had a somewhat more functional deficit before the operation that included a state of confusion. One and four months after discharge from