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Research Article

The Risk of Malnutrition in the Frail Elderly: Two Realities Compared. Observational Study of the Nursing Approach to Protein-Energy Malnutrition in the Elderly Patient in Hospital and in Assisted Healthcare Residence

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Abstract

This research project has the following general objectives: the description of the attitudes of nurses towards protein-energy malnutrition in elderly patients in hospital and health residences and the search for suitable strategies to prevent, recognize and treat it.

The observation and survey period was the quarter from February 2019 to May 2019. A questionnaire was created based on the "The Staff Attitudes to Nutritional Nursing Care Geriatric" scale (SANN-G scale), which was validated in Italian (SANN-Gita Scale).

For each question a report of the responses given by the nurses was reported.

Malnutrition has today become a real pathology that must be diagnosed and prevented. For this reason, good care practices in hospitals and nursing homes are important for recognizing the signs of malnutrition and, the earlier this occurs, the earlier correction can be made.

Keywords: *Frail Elderly; Malnutrition; Nursing Approach*

Introduction

Protein-energy malnutrition can affect almost all the functions of organs and systems of the body. The conditions of malnutrition and disease are related. It is defined as a true "disease within disease". When a protein-energy malnutrition occurs, a series of mechanisms are put in place. These include decreased tissue volume, functional and/or microstructural alterations and macroscopic alterations, which lead to several clinical consequences that are divided into primary and secondary.

The primary ones involve changes in the organs and systems of the organism, which in turn lead to a global deterioration of the individual, explained precisely by the secondary clinical consequences that malnutrition entails.

At the musculoskeletal level, a decrease in muscle mass can occur with a reduction in function and strength and a loss of autonomy. It is important to remember the phenomenon of sarcopenia, as it is a condition that involves the skeletal muscles and which has negative

effects on a multisystem level. It can be strongly related to malnutrition since the latter is one of the pathophysiological factors that can contribute to the development of this phenomenon.

Sarcopenia can be considered primary (or age-related) when there is no cause except aging, while it is secondary when there are one or more identifiable causes that can be related to activity (sedentary lifestyle, bed rest), disease (decompensation organ, inflammatory, neoplastic, endocrine diseases) and nutrition (inadequate caloric/protein intake, malabsorption and drugs that cause anorexia). Clinically, sarcopenia causes various relapses, the most relevant being: reduction of muscle strength (dynamic and static), with an increased risk of functional decline, disability and frailty; reduction of the ability to maintain balance with an increase in the risk of falls and fractures and significant consequences concerning bone trophism, thermoregulation, basal energy production, as well as the regulation of body composition and homeostasis. At the skin level, malnutrition involves a reduction in scarring and therefore a delayed healing of wounds.

Some deficiencies, for example that of vitamin C, can prevent scarring as they are essential in this process. The risk of pressure injury is very high in malnourished patients. In fact, they are pathological conditions that occur more easily in the elderly population with neurological problems and are associated with states of malnutrition, leading to significant consequences on morbidity and mortality. The main cause that leads to this situation is the prolonged one immobility which implies a compression ischemia, which in turn involves the necrosis of the soft tissues between the bone structures and the plane on which the body rests.

From the immune point of view, malnutrition leads to a decrease in the immune response and an increased risk of developing infections. The latter causes a dysfunction of the immune system, compromising its activation and the production of the complement system.

All the negative organic effects caused by malnutrition mentioned so far, in turn lead to negative outcomes that can have repercussions on the individual, but also on society.

In fact, secondary consequences include: increased morbidity and mortality, prolonged hospital stays, greater use of drugs and lengthening of the rehabilitation duration. What the nurse must do is recognize the problems that the elderly patient presents and try to prevent and treat malnutrition.

In the elderly patient we can find mainly difficulties in chewing and therefore a nursing intervention will be to encourage the patient to make regular dental visits to repair, fix or replace the dentures; or finely chop fruit and vegetables; choose minced meat poultry or fish.

The nurse may be faced with a patient with impaired glucose tolerance and therefore the nursing intervention will be to eat more complex carbohydrates rather than foods rich in simple sugars; or a patient with poor social interactions and loneliness and therefore the nurse will have to encourage appropriate social interaction during meals, encourage family members or assistants to serve food on a dinner table set to encourage conviviality [1-24].

Identification of the research problem

This research project originates from this statement: that the elderly subject is more vulnerable to the problem of malnutrition, it is estimated that 50% of patients in this category are undernourished upon admission to hospital and others develop the problem during same hospital stay. However, despite its frequency, malnutrition still remains an under-diagnosed and untreated problem.

This is how during my practical theoretical internship experience I wanted to research the motivations and strategies to tackle this research problem, focusing my attention on the awareness of nurses about the problem of malnutrition in the elderly and its consequences, on the strategies that they are used to recognize it, prevent it and treat it and therefore their attitudes on this problem.

In this regard, using databases and key works we have carried out a review of the academic studies that addressed this research problem.

We have found that our health systems are constantly evolving in the circumstances of maintaining a high will to ensure the country's leading edge. They do this by taking care to provide more and more technological means to enable the best medical services.

However, the fundamentals of health and care are being forgotten. In fact, malnutrition affects up to 10% of the hospital population of the European Union. Good food in hospitals is not an option, but it should be an essential requirement. Just as good nutrition should not only be a fundamental right of the person, but also the premise for a good state of health and a satisfactory quality of life. This is even more particularly so when we think of and refer to elderly people, since, in addition to being a population at risk, they are often affected by chronic diseases and comorbidities; therefore a poor nutritional status can accentuate the morbidity and more easily cause the death of the subject. In 2009, the Council of Europe declared that health care professionals should get better education about malnutrition. In fact, insufficient knowledge, limited interest and, consequently, negative attitudes towards the subject's nutrition, are perceived as obstacles to adequate nutritional practice.

The health workers who may worry, probably, about spending more time providing adequate nutrition, are nurses; for this reason their knowledge and their attitudes regarding the nutritional status of the subject play a fundamental role.

That said, some studies have shown that among care professionals there is a lack of good knowledge, appropriate attitudes and suitable practices respecting to nutritional assistance. Such propensities significantly affect the risk of not recognizing a malnourished person. This means that the patient is not receiving the appropriate care that, on the contrary, he would be entitled to. It has been shown that health professionals do not recognize a malnourished user and do not provide adequate nutritional assistance. Therefore, they lack knowledge of nutritional practice. These notions prove to be poor compared to three areas that ESPEN considers good for nutritional practice: patient screening at the time of admission, assessment of a malnourished subject and the initiation of nutritional treatment. On the contrary, it has been observed that those who have good knowledge of this topic, in turn, carry out good nutritional practice. Therefore, it could be argued that a poor nutritional culture of nurses could fall in the form of a negative attitude in one of the main causes that cause iatrogenic malnutrition in hospitals. In a further study, nursing students reported witnessing situations in which older patients are selective in their food choices. In fact, it happens that they pick up the foods that are easier to eat from the tray and leave out the rest. This is done to prevent the tray from being withdrawn too quickly. It has been seen, in fact, that these are often withdrawn even before the patients have finished eating. Furthermore, nutritional assessment, which in clinical practice is the key strategy for early identification of those at risk of malnutrition, or already malnourished, is often not performed.

It can therefore be recognized that the undernourishment of the elderly in the hospital context continues to remain an unsolved problem. As a clear focus on risk management and nutritional assessment is not widespread enough, it needs to be further promoted and encouraged. At the same time it is important to improve the knowledge and awareness of nurses on the importance of providing good food and supporting the dietary needs of patients, especially during meals.

Furthermore, since the use of nutritional care practices, such as screening and evaluations that are carried out through screening tools and protocols, are sub-optimal in the hospital setting, it is of great importance to provide greater awareness of the importance of these devices. Furthermore, we also wanted to deepen, through the literature review, the area of malnutrition in Assisted Healthcare Residences, not many articles were found, as by reading the abstracts we noticed that the studies were not developed in contexts not relevant to the research (home for the elderly) and pediatric or adolescent subjects.

This research project has the following general objectives: the description of the attitudes of nurses towards protein-energy malnutrition in elderly patients in hospital and health residences and the search for suitable strategies to prevent, recognize and treat it.

While the specific objectives they set are: to investigate how well nurses know and are aware of the problem of malnutrition in the elderly both within the internal medicine and surgical departments, and in the nursing homes for nurses.

Materials and Methods

The design of the study is of a comparative type: the nursing approach to protein-energy malnutrition within the hospital of the Local Health Authority of Barletta is compared with that of an Assisted Healthcare Residence.

Therefore, by defining nurses who work within a hospital setting in contact with elderly patients as an accessible population, we have formulated the sampling program.

In fact, through a convenience sampling, we recruited the nurses who wanted to participate in the study, and who belonged to the hospital context or to assisted care residence.

To make the sample more representative of the characteristics, we preferred to recruit nurses operating within four wards of the Andria hospital unit of the Local Healthcare Company, as: Medicine, Surgery, Anesthesia and Reanimation, First Aid units.

The observation and survey period was the quarter from February 2019 to May 2019. A questionnaire was created based on the "The Staff Attitudes to Nutritional Nursing Care Geriatric" scale (SANN-G scale), which was validated in Italian (SANN-Gita Scale).

The SANN-G scale is an adaptation by Christensson and Bachrach-Lindström from a previously validated scale, but not specific for elderly subjects. The latter is a tool that can be used to assess the attitude of nurses towards malnutrition and can help improve nutritional care and implement appropriate strategies to change negative actions towards nutritional assistance in the elderly. The SANN-G Scale consists of several verbal instructions (items) that show a point of view on a given topic. In this case, those who complete the scale can express their choice based on five options: "completely agree", "partially agree", "neither agree nor disagree", "partially disagree" and "completely disagree".

In addition to the administration of the SANN-G scale, the participants were asked to fill in a short personal data sheet where the following data were requested: gender, age, length of service, school level (diploma/degree), operating unit to which they belong.

Furthermore, before starting the research and distribution of the questionnaires, the participants were informed about the purpose and aspects of the study by submitting an informed consent.

Results

Analysis of the single items of the scale administered

It is useless to weigh all patients/guests

In the hospital, 77% of nurses do not agree with the proposed item; on the contrary, 17% of nurses show a positive approach towards the same item and finally 6% a complete neutrality.

Unlike in assisted residences, 90% of nurses do not agree with the proposed item; differently 10% of the nurses show a positive approach towards the same item and finally 0% a complete neutrality.

Seniors who are cared for in a geriatric clinic or nursing home do not want to be asked questions about their previous eating habits

In the hospital, 57% of nurses do not agree with the proposed item; on the contrary, 10% of nurses show a positive approach towards the same item and finally 33% a complete neutrality. Unlike in assisted residences, 20% of nurses do not agree with the proposed item; differently, 80% of nurses show a positive approach towards the same item and finally 0% complete neutrality.

Patients/guests with swallowing difficulties should not be encouraged to eat alone

In the hospital, 47% of nurses do not agree with the proposed item; on the contrary, 37% of nurses show a positive approach towards the same item and finally 16% a complete neutrality.

In assisted residences, 40% of nurses do not agree with the proposed item, 40% of nurses show a positive approach towards the same item and finally 20% complete neutrality.

The dining room must be structured primarily to facilitate the work of the staff

In the hospital, 10% of nurses do not agree with the proposed item; on the contrary, 59% of the nurses show a positive approach towards the same item and finally 10% a complete neutrality.

Unlike in assisted residences, 0% of nurses do not agree with the proposed item; differently, 20% of nurses show a positive approach towards the same item and finally 80% complete neutrality.

It is impossible to prepare individualized meals for each patient/guest

In the hospital, 77% of nurses do not agree with the proposed item; on the contrary, 17% of nurses show a positive approach towards the same item and finally 6% a complete neutrality.

In assisted residences, 100% of nurses do not agree with the proposed item; differently, 0% of nurses show a positive approach towards the same item and finally 0% a complete neutrality.

It is not profitable to develop the ability to eat alone in patients/guests with eating problems

In the hospital, 43% of nurses do not agree with the proposed item; on the contrary, 27% of nurses show a positive approach towards the same item and finally 30% a complete neutrality.

In assisted residences, 60% of nurses do not agree with the proposed item; differently, 20% of nurses show a positive approach towards the same item and finally 20% a complete neutrality.

It is sufficient to carry out weight checks on patients/guests when requested by the doctor

In the hospital, 40% of nurses do not agree with the proposed item; on the contrary, 43% of nurses show a positive approach towards the same item and finally 17% a complete neutrality.

In assisted residences 80% of nurses do not agree with the proposed item; differently 10% of the nurses show a positive approach towards the same item and finally 10% a complete neutrality.

People over 70 do not need high nutritional value food as much as young people

In the hospital, 87% of nurses do not agree with the proposed item; on the contrary, 13% of the nurses show a positive approach towards the same item and finally 0% a complete neutrality.

In nursing homes, 100% of nurses do not agree with the proposed item; differently, 0% of nurses show a positive approach towards the same item and finally 0% a complete neutrality.

It is preferable that the staff serve the food on plates without the help of patients/guests

In the hospital, 29% of nurses do not agree with the proposed item; on the contrary, 39% of nurses show a positive approach towards the same item and finally 32% a complete neutrality.

In nursing homes 10% of nurses do not agree with the proposed item; differently, 20% of nurses show a positive approach towards the same item and finally 70% a complete neutrality.

Staff with extensive experience in the field of care always know what patients/guests need to eat

In the hospital, 16% of nurses do not agree with the proposed item; on the contrary 57% of nurses show a positive approach towards the same item and finally 27% a complete neutrality.

In assisted residences 0% of nurses do not agree with the proposed item; differently, 90% of nurses show a positive approach towards the same item and finally 10% complete neutrality.

Only some patients benefit from the assessment of their nutritional status

In the hospital, 53% of nurses do not agree with the proposed item; on the contrary, 27% of nurses show a positive approach towards the same item and finally 20% a complete neutrality.

In nursing homes, 50% of nurses do not agree with the proposed item; differently, 0% of nurses show a positive approach towards the same item and finally 50% complete neutrality.

It is important that meals are served so that all patients/guests receive the same amount of food

In the hospital 40% of nurses do not agree with the proposed item; on the contrary, 37% of nurses show a positive approach towards the same item and finally 23% a complete neutrality.

In assisted residences, 90% of nurses do not agree with the proposed item; differently, 0% of nurses show a positive approach towards the same item and finally 10% complete neutrality.

Energy drinks are a good alternative to regular food

In the hospital, 23% of nurses do not agree with the proposed item; on the contrary, 74% of nurses show a positive approach towards the same item and finally 3% a complete neutrality.

In assisted residences 10% of nurses do not agree with the proposed item; differently 90% of nurses show a positive approach towards the same item and finally 0% a complete neutrality.

It is very rare that patients/guests cared for in geriatric clinics or nursing homes are undernourished

In the hospital, 67% of nurses do not agree with the proposed item; on the contrary, 27% of nurses show a positive approach towards the same item and finally 6% a complete neutrality.

In assisted residences, 90% of nurses do not agree with the proposed item; differently 10% of the nurses show a positive approach towards the same item and finally 0% a complete neutrality.

No specific knowledge or experience is required to feed patients/guests

In the hospital, 67% of nurses do not agree with the proposed item; on the contrary, 17% of nurses show a positive approach towards the same item and finally 16% a complete neutrality.

In assisted residences, 70% of nurses do not agree with the proposed item; differently, 20% of nurses show a positive approach towards the same item and finally 10% complete neutrality.

Meals do not need to be individually tailored

In the hospital 83% of nurses do not agree with the proposed item; on the contrary, 17% of nurses show a positive approach towards the same item and finally 0% a complete neutrality.

In assisted residences 80% of nurses do not agree with the proposed item; differently 0% of nurses show a positive approach towards the same item and finally 20% a complete neutrality.

Overweight patients/guests should always be placed on a low calorie diet

In the hospital 20% of nurses do not agree with the proposed item; on the contrary, 53% of nurses show a positive approach towards the same item and finally 27% a complete neutrality.

In assisted residences, 0% of nurses do not agree with the proposed item; differently, 80% of nurses show a positive approach towards the same item and finally 20% complete neutrality.

After analyzing the results obtained from filling in the questionnaires for each item and after comparing the responses obtained from the hospital and the Assisted Healthcare Residence by making a mathematical average on the answers given, it was possible to create a single graph in such a way as to highlight the (positive, negative, neutral) approach of the nurses towards the respective items: in the hospital setting, an average percentage of 50% in reference to the negative approach of nurses regarding malnutrition in the elderly; an average percentage of 33% in reference to the positive approach and finally an average percentage of 17% in reference to the neutral approach of nurses.

Instead, from the data obtained from the analysis carried out in the assisted residences of reference, there is an average percentage of 54% in reference to the negative approach of nurses regarding malnutrition in the elderly; an average percentage of 23% both in reference to the positive approach and in reference to the neutral approach of nurses.

Discussion

Malnutrition has today become a real pathology that must be diagnosed and prevented. For this reason, good care practices in hospitals and nursing homes are important for recognizing the signs of malnutrition and, the earlier this occurs, the earlier correction can be made.

The purpose of a nutritional assessment is to identify patients at risk of malnutrition and those in inadequate nutritional conditions. In most health care settings, responsibility for nutritional assessment and support is shared between the physician, dietician and nurse. Since a comprehensive nutritional assessment takes time and money, various types of assessments are available.

Nurses conduct nutritional screening. A malnutrition risk screening is a rapid process that is performed with the aim of identifying those individuals predisposed to nutritional risk. Screening should be performed within the first 24 - 48 hours after first contact with the subject and repeated thereafter a regular intervals. Thereafter, a nutritional assessment should be undertaken with subjects found

to be at risk. A full nutritional assessment is done by a nutritionist or dietician and physician. What is evaluated in the screening are the patient's anthropometric data (height, body weight), biochemical data (hemoglobin, serum albumin), clinical data (hair and nails, mucous membranes) and dietary data (24 hour food diary, power frequency). Nurses conduct nutritional screenings through routine nursing history and physical exams.

Screening tools such as the Patient Generated Subjective Global Assessment (VGSGP) and the Nutritional Screening Initiative (ISN) can be incorporated into the nursing history.

The VGSGP test is a method of classifying patients as well fed, moderately malnourished or severely malnourished on the basis of dietary history and physical examination.

The ISN screens elderly patients using a checklist containing nine red flags of conditions that can interfere with good nutrition. The health system offers increasingly technological means and systems to allow for better performance.

Strategies to combat malnutrition

Good food in hospitals and nursing homes must be an essential requirement. Just as a healthy and correct diet should not only be a fundamental right of the person, but also the premise for a good state of health and a satisfactory quality of life. This is even more particularly so when we think of and refer to elderly people, since, in addition to being a population at risk, they are often affected by chronic diseases and comorbidities; therefore, a poor nutritional status can accentuate the morbidity and more easily cause the death of the subject.

Nursing staff can be in charge of the delivery and collection of trays and must evaluate the existence of feelings of embarrassment, resentment and loss of autonomy of the patient. The nurse should help patients who are unable to feed rather than feed them.

Some patients become depressed because they need help and believe they are a burden to the nursing staff. The nurse must not appear hasty, expressing all his availability. Always allow the patient time to chew and swallow before offering him more food and give him a drink when he wants or, if unable to communicate, offer him after every three or four bites.

Special cutlery may sometimes be used to assist a patient in feeding. For patients who have difficulty drinking from a cup or glass, the use of a straw often allows them to obtain liquids with less effort and without spilling them.

Particular attention must be paid during meals to patients with dementia, cognitive impairment or other pathologies that increase the risk of aspiration of food into the trachea. The support staff to whom control of the patient is delegated must be able to observe any changes, such as increased appetite, changes in mental status, signs of difficulty in swallowing (dysphagia), cough and suffocation. For patients with cognitive problems, a useful strategy is to present one course at a time and hand over only the utensils that the patient can use.

By reducing distractions, the patient can focus on nutrition. One study revealed that music can reduce behavioral problems in individuals with dementia during meals. Many care tools are available to help patients maintain their degree of independence. A standard tool, which presents to an enlarged handle, it helps patients who cannot grasp objects easily, or you can modify a eating utensil by wrapping foam rubber around the handle. The handles can also be bent or angled. Plates with applicable iron or plastic edges allow the patient to collect the food by pushing it on them first. Non-spill or double-handled cups are mostly used by people with hand coordination problems.

Nursing training: Fundamental element

In 2009, the Council of Europe declared that health care professionals should receive better education about malnutrition. In fact, insufficient knowledge, a limited interest in negative attitudes towards the subject's nutrition, are perceived as obstacles to adequate nutri-

tional practice. For this reason their knowledge and their attitudes regarding the nutritional status of the subject play a fundamental role. It has been shown that health professionals do not recognize a malnourished user and do not provide adequate nutritional assistance. They lack knowledge of nutritional practice. On the contrary, it has been observed that those who have good knowledge of this topic, in turn, carry out good nutritional practice. In a further study, nursing students reported witnessing situations in which older patients are selective in their food choices. In fact, it happens that they pick up the foods that are easier to eat from the tray and leave out the rest. This is done to prevent the tray from being withdrawn too quickly. It has been seen, in fact, how these are withdrawn even before the patients have finished eating. It can therefore be said that the malnutrition of the elderly in hospitals and nursing homes remains an unsolved problem. As a clear focus on risk management and nutritional assessment is not widespread enough, it needs to be further promoted and encouraged. It is important to improve nurses' knowledge on the importance of providing good food and supporting the dietary needs of patients, especially during meals.

Furthermore, since the use of nutritional assistance practices, such as screenings and assessments that are carried out through screening tools and protocols, are excellent in the hospital setting, it is of great importance to provide greater awareness of the importance of these devices.

The nursing staff taken into consideration is obviously not able to recognize what could be a fragile patient at risk of malnutrition and malnutrition and then to treat him adequately in order not to worsen his health conditions.

Conclusion

In light of these worrying data, the best solution could be to involve nursing staff in training courses regarding malnutrition and malnutrition of a frail patient such as the elderly.

Having constantly updated and continuously trained nursing staff is very important for our society and this can be a good way to prevent and treat a serious condition such as malnutrition, even in any type of patient.

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