博　士　論　文　要　旨

題　　目

低栄養の課題を抱える在宅要介護高齢者を対象とした多職種による食支援の効果

Effects of inter-professional meal support for community dwelling elderly with undernutrition

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入学年月　平成 29 年 4 月　入学

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国立長寿医療研究センターによる平成 24 年度老人保健健康増進等事業「在宅療養患者の摂食状況・栄養状態の把握に関する調査研究報告書」では，在宅で療養している高齢者の栄養評価で 36.0%が「低栄養」，33.8%が「低栄養のおそれあり」と報告している．

低栄養ではエネルギー源として筋肉などの体内蛋白質を利用するため，サルコペニアを助長し，日常生活動作の低下や廃用症候群につながる．さらに，低栄養は免疫機能低下による易感染状態を招きやすく，合併症の回復遅延，褥瘡の発生，脱水などに陥りやすく，死亡率の上昇に影響を及ぼす．特に要介護高齢者においては，低栄養のリスクを考慮すべき状態にあり，その要因の背景は身体的，心理・精神的，社会的要因等,複合的で多岐にわたる．

在宅においては，様々な疾患を持つ高齢者に対して多様な療養環境において栄養管理を行わなければいけない．そのためには，高齢者の栄養状態の改善への支援には在宅医療に関わるすべての職種が連携して栄養管理を行うことが大切である．人が食べることができるか否かは 1 つの要因で決まるわけではないため，専門性をもつ多職種の支援が必要となる．昨今の医療現場では，医師，看護師，栄養士，薬剤師などの専門職や事務職が 1 つになって，患者に適切な栄養管理を行う栄養サポートチーム（Nutorition Support Team：NST　以下 NST とする）の活動が注目されている．在宅においては，地域一体型 NST や在宅 NST の活動報告はあるものの，学術的に論じた研究は少なく，在宅における食支援の知識や技術の普及を推進していくためにも，その実践内容や効果を明らかにする必要がある．

そこで，本研究では第 1 段階の研究として，在宅要介護高齢者の栄養状態の実態とその関連要因を明らかにし，低栄養の課題検討に向けて考察する．その結果を踏まえて，第 2 段階の調査で,低栄養の課題がある在宅要介護高齢者を対象に，普段から在宅生活を支える多職種の協力のもと，老人看護専門看護師，管理栄養士，摂食嚥下障害看護認定看護師が栄養サポートチームとして，個別の食支援計画を立案し，その実践内容と効果を明らかにすることを目的とする．

「第 I 章　序論」では，研究背景として在宅要介護高齢者の低栄養の現状と在宅における栄養サポートチームの課題を述べた．そして，文献検討により，在宅要介護高齢者の栄養状

態の実態と栄養状態に関連する要因，在宅要介護高齢者に対する栄養介入の効果について検討し，本研究の意義を検討した．

「第Ⅱ章　第 1 段階の研究」では，在宅要介護高齢者の栄養状態の実態と関連要因を明らかにし，低栄養の課題検討に向けて考察することを目的とした．対象者 23 名の自宅に訪問し，調査項目の聞き取り，観察，測定をした結果，約 91%が簡易栄養状態評価で「低栄養」または「低栄養のおそれあり」であった．低栄養の課題として，21.7%が定期的に体重測定していない，下腿周囲長 31 ㎝以下が 56.6%を占め，音節交互反復運動や反復唾液嚥下テストの結果から，口腔機能低下や嚥下筋のサルコペニアの可能性や，約 35%が口腔衛生に問題があった．摂食嚥下領域の評価・訓練および栄養面のサポートを行う専門職を交えた支援の必要性が示唆された．

「第Ⅲ章　第 2 段階の研究」では，低栄養の課題を抱えた 9 名の在宅要介護高齢者を対象に，多職種による個別の食支援を 3 か月間実施し，その効果を検証することを目的とした．個別の食支援は，普段から対象者の在宅生活を支える多職種の協力のもと， 老人看護専門看護師，管理栄養士，摂食嚥下障害看護認定看護師が対象に応じて栄養指導・食形態の調整・姿勢の調整・口腔ケアの指導・摂食嚥下訓練の指導・栄養補助食品の調整を実施した．

評価項目は Kuchikara Taberu Balance Chart (以下，KTBC とする)，血清アルブミン値，握力である．個別の食支援により，介入前，介入直後，介入 2 か月後の KTBC の「口腔状態」と「栄養」にそれぞれ有意な改善を認め，口腔内の清潔保持，体重の維持が図れた．介入 2 か月後も血清アルブミン値を維持していた 7 名のうち 4 名は栄養指導により望ましい食変容があった対象であった．このことから，一旦獲得された食生活は，生活に定着し効果の持続が期待できるのではないかと推測できた．しかし，今回は介入 2 か月後の変化までしか見ていないため，食生活の定着については引き続きの検討課題であった．口腔機能評価の一つである舌圧と強い相関関係にある握力を評価項目としたが，有意差はみられず，介入直後に大きく低下している者がいた．病状の変化や要介護度に影響を受けやすい握力は，対象者数が限られた調査の評価として限界があったと考えられる．口腔機能維持や嚥下筋のサルコペニア予防の目的で実施した摂食嚥下訓練（巻笛）は，3 か間月継続できた者は 3 名のみであった．巻笛の継続には本人の動機付けや，介護者の根気強い関わりや実施するうえで時間配分の工夫等が示唆された．介入研究では介入期間を厳密に設定する必要があるが，倫理的な問題や調整等の関係もあり，一部の対象者の食支援で介入期間を延長せざるを得なかったことは本研究の限界でもあった．

「第Ⅳ章　事例研究」では，第 2 段階の研究対象者のうち、食支援により食べる意欲を取り戻した認知症高齢者の事例を分析してまとめた．

「第Ⅴ　終章」では，研究全体の結果を考察し，在宅における食支援の必要性と課題,低栄養のリスクの高い地域在住高齢者をサポートできる地域ケアシステムの構築について言及し将来的な展望を述べた．

Effects of inter-professional meal support for community dwelling elderly with undernutrition

According to health promotion services for the elderly for FY2012 made by National Center for Geriatrics and Gerontology such as “research reports about nutritional conditions and ingestion states of home-treatment patients”, it was reported that 36.0 % of the elderly curing at home were “undernutrition” and 33.8% of them were “being at risk of undernutrition” in the nutrition assessment.

Undernutrition encourages sarcopenia and leads to disuse syndrome or a decrease of activities of daily living (ADL) due to utilization of protein in the body like muscles as a source of energy. In addition, it tends to cause bedsores: dehydration, the delay of recovery from complications and being compromised by immune function decrease. Therefore, it affects increased mortality. Especially for the elderly in need of home-care, they are usually in the condition that should be considered about the risk of undernutrition. Behind being the condition is that there are physical: psychological, mental and social factors complexly.

In staying home, a nutrition management should be done with the elderly having various diseases in multifarious care environments. Hence, it is important to perform the nutrition management collaborating with all professions related with home-treatment via seeing the nutritional status of the elderly. Because whether or not a person can eat isn’t decided by one factor only, inter-professional support is necessary. In current medical sites, activities of a nutrition support team (hereafter, called NST) that office clerks and specialists such as doctor: nurse, nutritionist, pharmacist work together as one and perform the nutrition management properly for patients, has been gathering attention. As for being at home, although there are some activity reports of community-integrated NST and in-home NST, studies discussing them scholarly are few. In order to promote the spread of knowledge or skills of meal support at home, it is necessary to define practical contents and effects of the meal support.

Hence, as a pilot study, the author clarified the reality of the nutritional status of the elderly in need of home-care and the related factors; considered them to examine issues of undernutrition. Based on the result, aiming at the elderly in need of home-care, certified nurse specialists (CNS) in gerontological nursing: certified nurse (CN) in dysphagia nursing and registered dietitians formed NST and drew up individual meal support plans with cooperation of multiple professions usually supporting the elderly’s life at home. The purpose of the study was to clarify the practical contents and the effects of them.

The research below was conducted with the approval of “ethical review board” of Ishikawa Prefectural Nursing University.

In ”Chapter 1: introduction”, issues of NTS in staying home and the current status of

undernutrition of the elderly in need of home-care were mentioned as a background of the study. Furthermore, the factors related with a real picture of the nutritional conditions of them: the effects of nutrition intervention for them and the significance of the study were considered by a literature review.

In "Chapter 2: the first stage of the study", the study aimed at clarifying the reality of the nutritional status of the elderly in need of home-care and the related factors; considering them to examine issues of undernutrition. As a result of the interview: observation and measurement of survey items via visiting 23 participant's home, about 91% of the participants were "undernutrition" or "being at risk of undernutrition" in Mini Nutritional Assessment-Short Form(MNA). As the issues of nutrition, 21.7% of them didn't weigh themselves regularly, 56.6% were less than 31cm in their calf-circumference, and about 35% had oral health problems such as oral- function decrease and sarcopenia in muscles of swallowing seen from the result of oral-diadochokinesis and repetitive saliva swallowing test. Therefore, the necessity of assessment and training of the field of swallowing, support by professions including the ones who do nutritional support was suggested.

ln "Chapter 3: the second stage", targeting at nine elderly people in need of home-care with having problems of undernutrition, inter-professional and individual meal support was conducted for three months in order to examine its effects. As for the support, certified nurse specialists (CNS) in gerontological nursing: CNS in dysphagia nursing and registered dietitians provided guidance of nutrition: oral-care, training for swallowing difficulties, and they conducted adjustment of nutritional supplementary foods and methods of meals in response to the participants with the cooperation of various professionals who usually help at-home life of the elderly people. Evaluation items were Kuchikara Taberu Balance Chart (hereafter, called KTBC), serum albumin and grasping power.

Significant improvement was seen in each "oral-conditions" and "nutrition" in KTBC before and immediately after the intervention and two-month after the one due to the individual meal support. Maintenance of weight and intraoral hygiene could be carried out. Four out of seven participants who kept a normal serum albumin level had a desirable eating behavior modification by nutrition guidance.

Thus, it could be assumed that a diet habit once achieved will be rooted in daily lives and have a potential for continuance of its effects. However, establishing the diet habit was still a subject for discussion because the changes could be seen until two-month after the intervention this time. Although grasping power which correlates strongly with one of the evaluation of oral-functions such as a tongue pressure, was regarded as the evaluation item, there was no significant difference, and some of the elderly significantly decreased their grasping power immediately after the intervention. It is considered that there was a limit to the grip strength as the evaluation of the assessment of which the number of the participants was limited because the strength was influenced easily by nursing care level

or changes in symptoms.

Only three participants could keep the training for swallowing difficulties (using a party horn) to maintain oral-functions and to prevent sarcopenia of swallowing muscles for three months. For continuance of breathing by use of the party horn, it was suggested that motivation, assiduous involvement and well-designed time allocation in doing the breathing, etc. were necessary. In the intervention study, though it was necessary to decide the period of the intervention strictly, extension of the period was inevitable in the meal support of some participants because of ethical concerns, adjustment and so on. This was also a limit of this study.

In “Chapter 4: case studies”, cases of the elderly with dementia who got back an appetite because of the meal support in the participants in the second stage, were analyzed and summarized.

In “Chapter 5: epilogue”, conclusions of the whole study were considered, and future prospects about necessities and issues of the meal support at home were mentioned.