

なされていないことで、適切な評価ができずにいることが分かった。特に、カテーテル出口部の観察は十分に行っていてもその表現があいまいであったり、客観的に示せなかったりしているため、病棟・外来間での申し送りが的確に行われていないことが明らかになった。継続的な患者教育を行うために、出口部の皮膚の状態を画像として取り込むことで、視覚的に同じ情報を共有できるように、工夫した。

これらのケアと評価を含んだ思考過程を“看護管理文献”のアルゴリズム表記法に沿って、構造化を行った。CAPDカテーテル管理教育プログラムのアルゴリズムは3つのサブユニットからなっていた(アルゴリズムの図参照)。表記された「行為ノード」6件、「判断ノード」は4件、「判断分岐」6件であり、「アセスメントシート」は4シート、「参照シート」

は6シートとなった。アルゴリズム化された結果を、臨床の看護師にヒアリングした結果、思考と行為のプロセスが整理されて表現されていることが分かった。

【考察】出口部の画像をPCに取り込み患者教育に活用することで、患者と看護師間で出口部の皮膚の状態を共通認識することができると考えられた。また病棟と外来などといったケアする看護師が変わっても、同じ画像や記録を参照してケアをしていくことができるため、より良い継続看護につながると考えられた。これまで、共通認識しにくかった出口部の観察状態を画像として記録することや、明文化されることのなかったエキスパートナースの思考過程・看護実践を可視化することは、より高度なケアを多くの看護師が実践するための基盤となると考えられた。



Structural visualization of expert “PD catheter

Eiko Yamana ^a, Chizuru Kamiya ^b,

a Fukuoka Prefectural University,

b Junshin-kai University of Nursing and

c Gunma University, Gunma, Japan; Nursing,

e The University of Tokyo,

nursing: Dialysis patient education program management”

Michiyo Oka ^c, Mieko Sagawa ^d, Satoko Tsuru ^e

Fukuoka, Japan;

Health Sciences, Hyogo, Japan;

d National College of Japan, Tokyo, Japan;

Tokyo, Japan



Opening summary

Structural visualization was implemented on catheter management education for peritoneal dialysis (PD) patients requiring expert nursing. An education program utilizing electronic images was proposed as a method of monitoring the exit site which is of high importance in PD catheter self-management. Recording images of the exit site and utilizing them as part of the education program encouraged a common understanding of the exit site between nurses and patients and helped to achieve a better quality of patient education. It is thought that visualization of nursing practice and the thinking processes of expert nurses which have not been expressly stated previously can become a foundation for more advanced nursing care throughout the profession.

Keywords: Patients education, Peritoneal Dialysis, Catheter



Introduction

To seek out clinical examples of effective expert nursing in the field of dialysis patient education, which have nevertheless not been previously put into standard form or subjected to theory-based systematic exposition, on which to implement structural visualization. It aims to develop an education program for catheter self-management in PD patients.

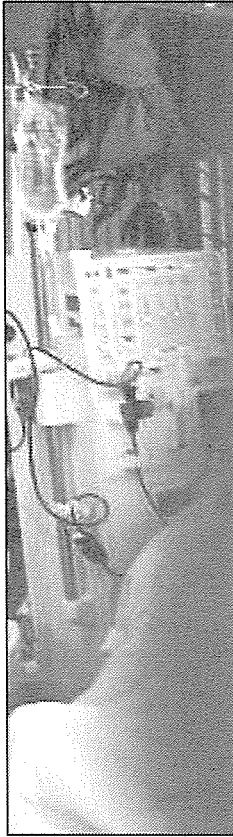
Methods

The literature review and web searches.

Interviews with two nursing professionals: One representative of PD outpatient services, and one nurse representative from a catheter manufacturer.

Structuring of care following algorithm notation method¹⁾.

Feedback from clinical nurses regarding this structuring.



Results (1)

From the literature review and web searches we were able to gain an introduction to the education and teaching methods of each facility, but for the most part there was insufficient basis. However, the PD catheter manufacturer's overseas pamphlet contained an account of a highly credible education program, and as a consequence during the interview the nurse was questioned about the suitability of the application of such a program in Japan. It was discovered the content of the care was expert and applicable. Expert nurses could adapt the educational media to a patient's individual situation and deliver effective care, but the thinking process and nursing practice up to the implementation of care was not being recorded sufficiently and appropriate evaluation could not be made.



Results (2)

In particular, it was shown that even if there was adequate observation of the exit site it was expressed in vague terms or did not show objectivity. In order to deliver continuous patient education the condition of the exit site skin should be shown as an image to ensure that the same information is shared visually. The processes involved in this care and evaluation were organized following the algorithm notation method. The PD catheter management education program is made up of three sub-units. These are defined as "Action node" (6), "Thinking node" (4) and "choice node" (6). "Assessment item table" (4), and "Reference table" (6). From feedback from clinical nurses, the application of the algorithm allowed the thought and action process to be expressed in an organized way.



Conclusion

It is concluded that by putting images of the exit site onto PC, patients and nurses can both see and understand the skin's condition. Recording images of the exit site, where shared understanding was previously difficult, and visualizing the thinking processes of expert nurses which have not been expressly stated previously, can become a foundation for more advanced nursing care throughout the profession.



References

- [1] Tsuru S., Nakanishi M., Watanabe C. et al. 2005. Development of Programmed Care based on structural Visualization of Expert Nursing. Japanese Journal of Nursing Administration, Vol.17 (7) pp.555-561 (Japanese).
 - [2] Tsuru S. et al. 2004. Standardization of Nursing Practice Terminology for Electric Health Record system in Health Care and Welfare service in Japan. Research report in grant from Japan Ministry of Health, Labor and Welfare, total 698 pages (Japanese).
 - [3] Baxter Healthcare Corporation: Peritoneal Dialysis Catheter and Complications Management / Booklet.2001.
- This study was supported by a grant from Japan Ministry of Health, Labor and Welfare (No.15150501; Supervisor is PhD Satoko Tsuru).

Address for correspondence

Eiko Yamana

Fukuoka Prefectural University

4395 Ita, Tagawa-city, Fukuoka 825-8585, Japan.



TEL +81-947-42-2118 , FAX +81-947-42-6171

E-mail: yamana@fukuoka-pu.ac.jp


- Check point:
 - Determine factors that may impact initial wound healing and exit site management
 - clinical status (chronic cough, steroids, edema)
 - nutritional status, abdominal wall weakness
 - presence of gastrostomy tube, button or ureterostomy
 - Evaluate need for repair of abdominal weakness or hernia
- Nursing intervention
 - confirm catheter placement date
 - determine exit site location
 - location determined by patient, nephrologist and surgeon
 - mark in sitting position
 - avoid scars, belt line, fat and skin folds and pressure points from clothing
 - mark lateral to midline; placement through body of rectus muscle helps avoid catheter leakage
 - locate to maximize self-care skills
 - provide postoperative supplies and care instructions including: soap, masks, absorbent dressing, tape, and exit site cleansing agent/skin disinfectant

Figure2. [R2] : preoperative program

Table1. [R5] : Intervention program 1

Nursing intervention	Outcome	evaluation method
<input type="checkbox"/> Make CAPD catheter sheet which patient and nurse can use information about catheter for together. →refer to figure 3 [R]  <input type="checkbox"/> Offer CAPD's knowledge.	I can understand one's catheter.	The oral question and check using the check list are performed for the knowledge check about CAPD catheter. →refer to table2[A3] 

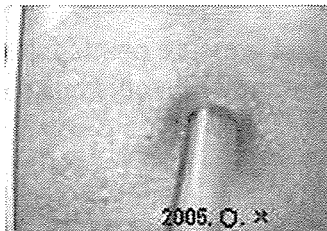
☆ name _____ CAPD catheter sheet
 (Date / /)



2005. 0. 0

Take the picture of exit site !
(digital camera)

The patient's comment (Observed it).
and
The observation item along the educated content is added by the message, and it preserves it in the clinical record. The expert nurse comments along programmed care.
It cares when it is necessary.



2005. 0. *

Figure 3 [R]: CAPD catheter sheet


Nursing intervention	Outcome	evaluation method
<input type="checkbox"/> Offer knowledge about a method of self-management. <input type="checkbox"/> Show a concrete method in a model. (1) how to wash a hand (2) observing exit site (3) evaluating state of exit site (4) Care for exit site (5) evaluating function and state of catheter. (6) Evaluation of catheter complications. (7) Correspondence at the time of abnormality ∴ →refer to figure 3 [R]	The method of self-management can be explained. The time of being abnormalities is known.	The oral question and check using the check list are performed for the knowledge check about self-management. →refer to table 2[A4] 

Figure4. [R6] : Intervention program 2

**Table2 [A3]: Assessment of knowledge of CAPD catheter
[A4]:Assessment of knowledge of catheter self-management**

Check item	Question contents	date	Evaluation	signature
1.The necessity for CAPD catheter is known.	(1) In what thing do know CAPD catheter ?			
2. Observation of CAPD catheter (1)catheter under skin (2) exit site (3) back of catheter (4) Confirmation of joint	(1) redness, bleeding, swelling at exit sites, pus (2) redness, bleeding, swelling at exit sites, pus (3) Observation with loupe, magnifying glass (4)split trace, confirmation of a crack, the slack?			
3.Understand the method of keeping the skin clean. (1)the washing and disinfections of surroundings. (2)shower	(1)Can you explain the disinfection method? And Can you disinfect it in asepsis? (2)Can you keep the cleanness of the skin in the exit site surroundings?			

**Table2 [A3]: Assessment of knowledge of CAPD catheter
[A4]:Assessment of knowledge of catheter self-management**

Check item	Question contents	date	Evaluation	signature
1.The necessity for CAPD catheter is known.	(1) In what thing do know CAPD catheter ?			
2. Observation of CAPD catheter (1)catheter under skin (2) exit site (3) back of catheter (4) Confirmation of joint	(1) redness, bleeding, swelling at exit sites, pus (2) redness, bleeding, swelling at exit sites, pus (3) Observation with loupe, magnifying glass (4)split trace, confirmation of a crack, the slack?			
3.Understand the method of keeping the skin clean. (1)the washing and disinfections of surroundings. (2)shower	(1)Can you explain the disinfection method? And Can you disinfect it in asepsis? (2)Can you keep the cleanness of the skin in the exit site surroundings?			

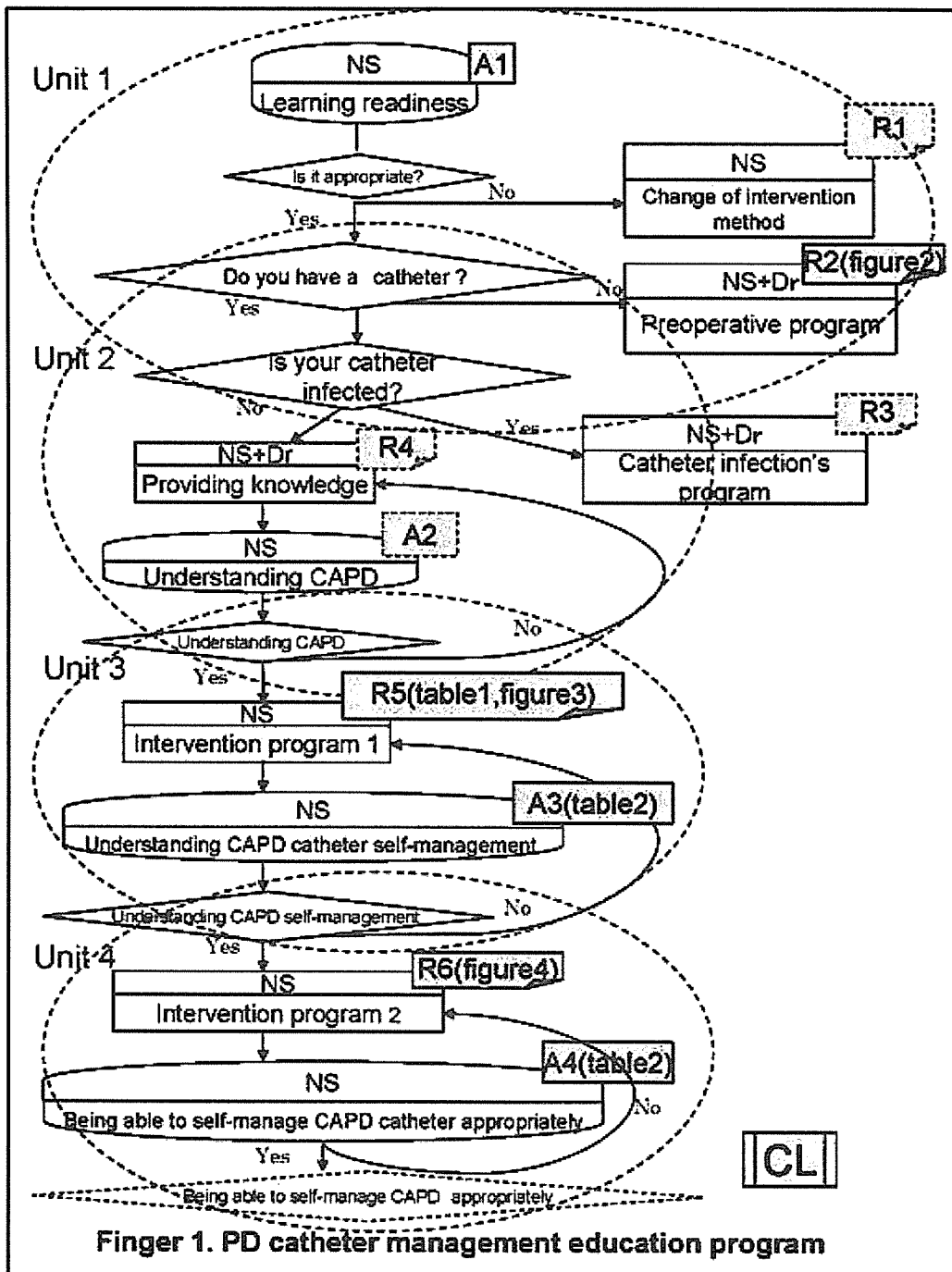


Figure 1. PD catheter management education program

Structural visualization of expert nursing: hemodialysis patient education program “behavior modification program for hemodialysis patients”

Michiyo Oka^a, Chizuru Kamiya^b, Mieko Sagawa^c, Eiko Yamana^d, Satoko Tsuru^e

^aKitasato University School of Nursing, Kanagawa, Japan; ^bAkita University, Akita, Japan; ^cNational College of Nursing, Japan, Tokyo, Japan; ^dJapanese Nursing Association, Tokyo, Japan; ^eSchool of engineering The University of Tokyo, Tokyo, Japan

Opening summary

Behavior modification program (BMP) have been suggested to be useful for the self-management of hemodialysis (HD) patients. To provide more systematic care, we structured the procedure of the thinking process and care in BMP as an algorithm. BMP developers produced a temporary algorithm based on previous studies, and discussed it with nurses with BMP experience, and added and revised necessary items. As a result, an algorithm of BMP with high reproducibility that allows maintenance of consistent quality for the self-management of HD patients could be developed.

Keywords: Patients education, health behavior, hemodialysis

Introduction

BMP facilitate effective water/meal management in hemodialysis (HD) patients. These programs provide support for patients' self-management will and behavior modification using health behavior models and cognitive behavioral therapy as references. BMP consist of techniques such as self-monitoring (SM) and step-by-step (SS), and have been shown to be effective in water/meal restrictions¹⁻⁷⁾. However, if the thinking process and procedure differ among interveners who practice BMP, BMP may not be effectively utilized. To maintain the quality of BMP and provide more systematic care, we developed an algorithm that shows a stepwise method with clear description of necessary items and confirmation items of the BMP procedure.

Methods

- 1 BMP developers produced a procedure consisting of 6 steps based on previous studies
- 2 To construct a more practical algorithm, they discussed the procedure with nurses with BMP experience.

Results

Reference table, the assessment item table, and thinking node were itemized to guarantee the quality of the algorithm. In the stage before the SM technique and SS technique, evaluation of the validity of medical treatment in subjects and their assessment of the preparatory state for learning were established. In addition, interventions by the SM and SS techniques were shown as action plans and points requiring attention (Table 1).

Discussion

Based on research procedures that have been shown to be effective and nurses' experience, evidence-based practical algorithmization of a self-management program for HD patients was possible.

References

- [1] Sagawa M, Oka M, Chaboyer W, Satoh W, Yamaguchi M. Cognitive behavioral therapy for fluid control in hemodialysis patients. *Nephrology Nursing Journal*. 2001; 28(1): 37-39
- [2] Oka M, Chaboyer W. The influence of self-efficacy and other factors on dietary behaviors on Japanese hemodialysis patients. *International Journal of Nursing Practice*. 2001; 7(6): 431-439
- [3] Sagawa M, Oka M, Chaboyer W. The utility of cognitive behavioural therapy on chronic haemodialysis patients' fluid intake: a preliminary examination. *International Journal of Nursing Studies*. 2003; 40(4): 367-373

This study was supported by a grant from Japan Ministry of Health, Labor and Welfare (No.15150501; Supervisor is PhD Satoko Tsuru)

Address for correspondence

Michiyo Oka, RN, Ph.D. Kitasato University School of Nursing,
2-1-1 Kitasato, Sagami-hara-City, Kanagawa, 228-0829 Japan
mox@nrs.kitasato-u.ac.jp <http://plaza.umin.ac.jp/~oka/>

Table 1 - Action plan table of the SM technique

Procedure	Points requiring attention
1. The SM table is handed to the patient.	(1) The SM table consists of goals, monitoring items, space for patient's free-description, space for feedback description such as nurses' comments, and the name of the nurse in charge.
2. SM items are decided by the nurse and patient together.	(1) Whether concrete attainment goals and behavioral goals have been set is confirmed (2) SM items are decided from the physical, behavioral, cognitive, and emotional aspects or in terms of merits and demerits (3) SM items should be measurable.
3. On the day of HD, the nurse and the patient perform assessment of SM together, and the nurse performs feedback to the patient.	(1) The purpose of the SM is not that patients write description in the table but that they become aware of changes in their own behavior, physical condition, and feeling. Therefore, when there are blanks in the table, evaluation is performed while the nurse writes instead of the patient. (2) Attention is paid to privacy, and the environment is adjusted to facilitate talking (3) When the attainment of the goals is difficult, the goals and SM items are evaluated and changed.

高度専門看護実践の構造的可視化－透析患者教育プログラム「血液透析患者の行動変容プログラム」

<Summary> 行動変容プログラム (Behavior modification program: BMP) は、血液透析 (HD) 患者の自己管理に対する効果が示されている。BMP における思考過程やケアの手順を、よりシステマティックなケア提供を構築するために、アルゴリズムとして構造化する。方法は、BMP 開発者が、既存の研究プロシジャーから仮アルゴリズムを作成し、BMP の経験者たちと討議を行い、必要項目の追加修正を行った。その結果、再現性が高く、質保証を保てる、HD 患者の自己管理のための BMP のアルゴリズム化を行うことができた。

【目的】透析患者の水分・食事管理を効果的に行うための援助方法として、行動変容プログラム (Behavior modification program: BMP) と呼ばれるものがある。このプログラムは、Health behavior models や Cognitive behavioral therapyなどを参考にして、患者の self management への意欲や行動変容を支援するプログラムである。BMP は、self-monitoring technique や step-by-step technique などなら成り、対象者の水分や食事制限に効果的であることが検証されている¹⁾³⁾。しかし、介入者によって BMP を展開するための思考過程や手順が異なると、BMP が効果的に活用されない可能性がある。そのため、BMP の質を保ち、よりシステマティックなケア提供を構築するために、BMP プロシジャーの必要項目や確認項目を明記し、段階的手法を提示するアルゴリズムを開発した。

【方法】1)BMP 開発者が、既存の研究から、

6つのステップよりなるプロシジャーを作成した。2) より実践的なアルゴリズムを構築するために、そのプロシジャーについて、BMP を経験したことがある看護師たちと討議した。

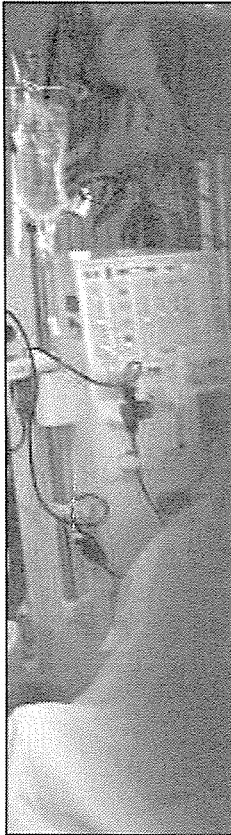
【結果】判断者や判断項目、アセスメントテーブルを項目立てて、アルゴリズムの質を保証した。セルフモニタリング法やステップバイステップ法に入る前の段階として、対象者に行われている医療処置の妥当性の検討や対象者の学習準備状態のアセスメントなどを設定した。さらに、セルフモニタリング法やステップバイステップ法による介入部分は、アクションプランと留意点として展開するようにした(Table)。

【考察】すでに効果が検証されている研究プロシジャーと看護師の経験から、エビデンスに基づいた実践的な、透析患者の self management プログラムのアルゴリズム化を行うことができたと考える。

表 Self-monitoring technique の action plan の表

手順	留意点
1. セルフモニタリング表を患者に渡す。	① セルフモニタリング表の構成は、目標、モニタリング項目、患者の感想などの自由記載欄、看護師のコメントなどのフィ

	ードバック記載の欄、担当看護師名。
2. セルフモニタリング項目を患者とともに決める	<p>①具体的な達成目標と行動目標が設定できているか確認する。</p> <p>②セルフモニタリング項目は、身体面、行動面、認知面、情意面または、メリット、デメリットの視点から設定する。</p> <p>③セルフモニタリング項目は、測定可能なものとする。</p>
3. 透析日、患者とともにセルフモニタリングの評価をし、看護師は患者へフィードバックを行なう。	<p>①セルフモニタリング法は、表に記述することが目標ではなく、自分の行動や体調、気持ちの変化に気づくことが目標であるため、書いていない場合は、看護師が代筆しながら評価する。</p> <p>②透析室環境は、ワンフロアであるため、プライバシーに配慮し、話しやすい環境調整を行なう。</p> <p>③目標の達成が困難な場合、目標やセルフモニタリング項目について検討し変更する。</p>



Structural visualization of expert program “behavior modification

Michiyo Oka ^a, Chizuru Kamiya ^b,

a Gunma University, Gunma, Japan; ^b Junshin-kai

c National College of Nursing, Japan, Tokyo, Japan;

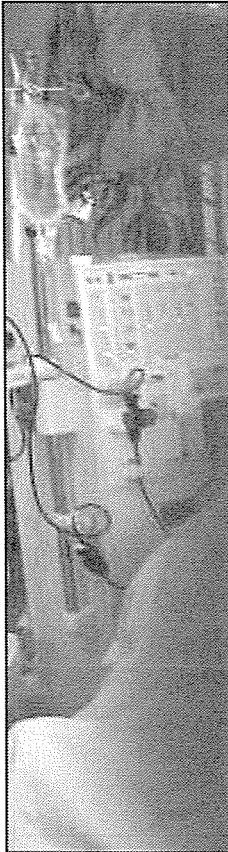
e The University of Tokyo, Tokyo, Japan

nursing: hemodialysis patient education program for hemodialysis patients”

Mieko Sagawa ^c, Eiko Yamana ^d, Satoko Tsuru ^e

University of Nursing and Health Sciences, Hyogo, Japan;

d Fukuoka Prefectural University, Fukuoka, Japan;



Opening summary

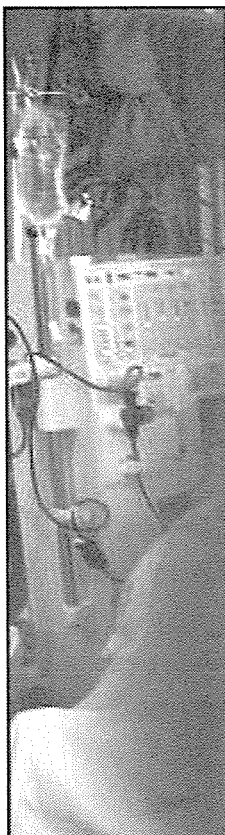
Behavior modification program (BMP) have been suggested to be useful for the self-management of hemodialysis (HD) patients. To provide more systematic care, we structured the procedure of the thinking process and care in BMP as an algorithm. BMP developers produced a temporary algorithm based on previous studies, and discussed it with nurses with BMP experience, and added and revised necessary items. As a result, an algorithm of BMP with high reproducibility that allows maintenance of consistent quality for the self-management of HD patients could be developed.

Keywords: *Patients education, health behavior, hemodialysis*



Introduction

BMP facilitate effective water/meal management in hemodialysis (HD) patients. These programs provide support for patients' self-management will and behavior modification using health behavior models and cognitive behavioral therapy as references. BMP consist of techniques such as self-monitoring (SM) and step-by-step (SS), and have been shown to be effective in water/meal restrictions¹⁻³). However, if the thinking process and procedure differ among interveners who practice BMP, BMP may not be effectively utilized. To maintain the quality of BMP and provide more systematic care, we developed an algorithm that shows a stepwise method with clear description of necessary items and confirmation items of the BMP procedure.



Methods

1. BMP developers produced a procedure consisting of 6 steps based on previous studies ¹⁾⁻³⁾.
2. To construct a more practical algorithm, they discussed the procedure with nurses with BMP experience.

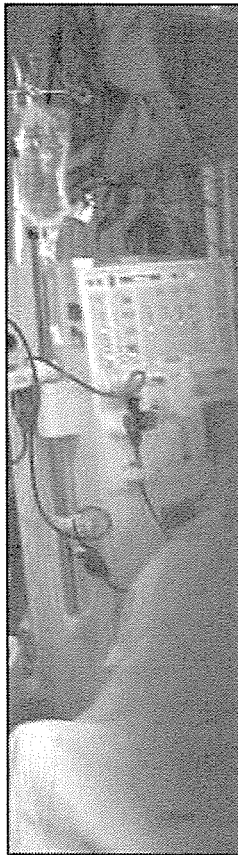
Results

Reference table, the assessment item table, and thinking node were itemized to guarantee the quality of the algorithm. In the stage before the SM technique and SS technique, evaluation of the validity of medical treatment in subjects and their assessment of the preparatory state for learning were established. In addition, interventions by the SM and SS techniques were shown as action plans and points requiring attention .



Discussion

Based on research procedures that have been shown to be effective and nurses' experience, evidence-based practical algorithmization of a self-management program for HD patients was possible.



References

- [1] Sagawa M, Oka M, Chaboyer W, Satoh W, Yamaguchi M. Cognitive behavioral therapy for fluid control in hemodialysis patients. *Nephrology Nursing Journal*. 2001; 28(1): 37-39.
- [2] Oka M, Chaboyer W. The influence of self-efficacy and other factors on dietary behaviors on Japanese hemodialysis patients. *International Journal of Nursing Practice*. 2001; 7(6):431-439.
- [3] Sagawa M, Oka M, Chaboyer W. The utility of cognitive behavioural therapy on chronic haemodialysis patients' fluid intake: a preliminary examination. *International Journal of Nursing Studies*. 2003; 40(4): 367-373.

This study was supported by a grant from Japan Ministry of Health, Labor and Welfare (No.15150501; Supervisor is PhD Satoko Tsuru).

