

NURSING CARE TO CLIENTS WITH ARTERIOVENOUS FISTULA: AN INTEGRATIVE REVIEW OF THE LITERATURE

Cuidados de enfermagem a clientes com fistula arteriovenosa: uma revisão integrativa da literatura

Atención de enfermería a clientes con fístula arteriovenosa: una revisión integrativa de la literatura

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ABSTRACT

Objective: to describe the care of nursing staff to customers bearers of Arteriovenous Fistula (AVF). **Method:** integrative Review of literature, which used as search question: what are the care of nursing staff to customers bearers of arteriovenous fistula? The search was conducted in the health Virtual Library, in the databases BDENF, LILACS and MEDLINE; PubMed; Capes Journal Portal, CINAHL, SCOPUS and bases in August 2018. **Results:** were found three articles indexed at LILACS and two in CINAHL. Analytical category emerged the study entitled: nursing care to clients suffering from AVF, and two units of decoding: “incorporation of evidence about the FAV, to think about nursing care” and “performance of nursing staff in preservation of FAV: thinking self-care”. **Conclusions:** the nursing care to clients suffering from perpassaram FAV durability and maintenance of your operation.

Descriptors: Renal dialysis; Nephrology nursing; Arteriovenous fistula; Nursing care.

RESUMO

Objetivo: descrever os cuidados da equipe de enfermagem aos clientes portadores de Fistula Arteriovenosa (FAV). **Método:** revisão integrativa de literatura, que utilizou como questão de busca: quais são os cuidados da equipe de enfermagem aos clientes portadores

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de fistula arteriovenosa? A busca foi realizada na Biblioteca Virtual de Saúde, nas bases de dados: MEDLINE, LILACS e BDNF; PubMed; Portal de Periódicos da Capes, nas bases SCOPUS e CINAHL, em agosto de 2018. **Resultados:** foram encontrados três artigos indexados na LILACS e dois na CINAHL. Emergiu a categoria analítica do estudo intitulada: *Cuidados de enfermagem aos clientes portadores de FAV*, e duas unidades de decodificação: “Incorporação de evidências sobre a FAV, para se pensar os cuidados de enfermagem” e “Atuação da equipe de enfermagem na preservação da FAV: pensando o autocuidado”. **Conclusões:** os cuidados de enfermagem aos clientes portadores de FAV perpassaram pela durabilidade e a manutenção do seu funcionamento.

Descritores: Diálise renal; Enfermagem em nefrologia; Fístula arteriovenosa; Cuidados de enfermagem.

RESUMÉN

Objetivo: para describir el cuidado de enfermería personal para portadores de clientes de la fístula arteriovenosa (AVF). **Método:** integral revisión de la literatura, que utiliza como pregunta de la búsqueda: ¿Cuáles son los cuidados de enfermería personal para portadores de fístula arteriovenosa de los clientes? La búsqueda se realizó en la Biblioteca Virtual, de la salud en las bases de datos, BDENE, LILACS y MEDLINE; PubMed; CAPES Portal diario, CINAHL, SCOPUS y en agosto de 2018. **Resultados:** se encontraron tres artículos indizados en LILACS y dos en CINAHL. Categoría analítica surgió el estudio titulado: atención a clientes de AVF y dos unidades de decodificación de enfermería: “incorporación de la evidencia acerca de la FAV, a pensar en cuidados de enfermería” y “rendimiento del personal de enfermería preservación de la FAV: autocuidado de pensamiento”. **Conclusiones:** la atención de enfermería a clientes que sufren de perpassaram FAV durabilidad y mantenimiento de su operación.

Descritores: Diálisis renal; Enfermería en nefrologia; Fístula arteriovenosa; Atención de enfermería.

INTRODUCTION

Thinking about nursing care to clients with arteriovenous fistula (AVF) puts professionals in this area in specific areas of knowledge that are challenging in their nature, such as: thinking the body dependent on hemodialysis (HD) with vascular changes in the upper limb/limbs.

These challenges invite nursing professionals to daily shift their gaze from Chronic Kidney Disease (CKD), to closely observe the dilemmas and health deviations that are experienced by clients in life in order to preserve and prevent complications in AVF.

At the epidemiological level, CKD is evidenced as a health condition with high incidence, prevalence and number of deaths.¹ This is a clinical condition and also a current, perhaps emerging, Public Health problem whose impact on the life of the client and his/her family sometimes overlaps the social and economic fields, given the high government costs of treatment for the disease itself.²

And to illustrate these meanings, the Brazilian Society of Nephrology, in 2017, considered in absolute numbers a total of 126,583 people with CKD, of which 92% undergo dialysis treatment with Hemodialysis (HD).¹ Specifically, this is a renal replacement therapy that promotes the electrolyte and urea removal by diffusion mechanism, also efficient

for the removal of metabolic waste and excess fluid in the human body.³

This procedure requires the creation of a vascular access, which may be temporary, with the use of central or permanent venous catheter, and the clinical intervention options are the AVF of interest in this study and the arteriovenous graft.⁴ AVF is surgically constructed from anastomosis, which allows direct blood flow from the artery to the vein.⁵

It is considered the main vascular access of choice for clients undergoing hemodialysis treatment, related to a better permeability rate in five years, lower rates of mechanical and infectious complications and requires fewer interventions compared to those who use a catheter.⁴

From this perspective, it is necessary to consider that this study deals with a problem theme that has many points of tension and that's because talking about nursing care in a specialized area by nature is complex, especially when considering patients with AVF as unique and singular.

The nurse is highlighted as responsible for the nursing team in providing care to patients with AVF. In addition, he/she has skills and abilities; cognitive and technical skills that are articulated in the environment of caring for other health professionals in an inter(disciplinary) way. The nurse's role is fundamental in identifying problems and complications that may impair the functioning of AVF and, consequently, affect the patient with CKD who needs his/her integrity to perform HD.⁶

Nursing care is started even before the use of AVF. Initiated in the management of vascular access, in order to guarantee the maintenance and permeability of the access aiming at its greatest durability. Thus, HD and AVF require adaptations in the client's life, which consists of several restrictions capable of compromising, to a greater or lesser extent, their daily activities.⁷

With these contextual threads, it is emphasized that the nurse, together with the nursing staff, are fundamental pieces in the process of changes in the client's life with the use of AVF, especially for helping them recognize and deal with daily limitations.

Thinking about AVF care clients and what the nursing staff does to help them, emerges the motivation of this investigation. Not an easy task, mobilizing concerns from the concrete experience at a hemodialysis clinic while performing academic and professional activities. There, in the intimate of caring, it was possible to verify in the client's reports the anguish of various orders produced by the FAV in their bodies.

A body that has an individual, historical and social language (re)signified from vascular alterations produced to assist in the treatment of renal dysfunction. Thus, our search for answers capable of meeting the needs of clients with renal dysfunction is driven by the following objective: to describe the care of the nursing staff to clients with Arteriovenous Fistula (AVF).

METHODS

This is an integrative literature review, a research method that has been applied today as a means of incorporating

scientific evidence in the area of Health and Nursing. It is a review modality that allows the transfer of new knowledge to the practice to speed up and benefit the care provided to the client and family.⁸

The design of this study was based on the following investigative steps: identification of the search question; selection of descriptors; selection of databases; application of inclusion and exclusion criteria; identification of selected studies; analysis of studies; presentation of results and categorization of findings.⁹

In the first stage, the following search question was delimited: what are the nursing care for clients with arteriovenous fistula? Secondly, the following Health Sciences Descriptors (DECS) were selected: “Renal Dialysis”, “Nephrology Nursing”, “Arteriovenous Fistula” and “Nursing Care”. In addition, the following indexing terms for articles in the health sciences field in the Medical Subject Headings (MeSH) were used: “Renal Dialysis”, “Nephrology Nursing”, “Arteriovenous Fistula” and “Nursing Care”.

In the third stage: a search was performed at the INTRANET – UFRJ website at the Virtual Health Library (VHL), in the following databases: *Medical Literature Analysis and Retrieval System Online* (MEDLINE), *Latin American and Caribbean Literature in Health Sciences* (LILACS) and *Nursing Databases* (BDENF); at Pubmed and the Higher Education Personnel Improvement Coordination (Capes) Journal Portal, in the following databases: SCOPUS, CINAHL.

In the fourth stage, the following criteria were defined: A) inclusion: articles in full and with free online access; time frame 2013-2017; Languages: Portuguese (Brazil),

English and Spanish. B) exclusion: elimination of incomplete texts and scientific productions that were not related to the thematic axis.

All systematization of the studies took place in August 2018. In the study selection stage, the manuscripts were analyzed following the reading of the titles, abstracts and full reading of the article when the study question was answered.

Regarding the classification of the level of evidence, a second instrument was used, the Hierarchical Evidence Rating for Study Evaluation:¹⁰ I) systematic review or meta-analysis, II) randomized clinical trials, III) non-randomized clinical trial, IV) cohort studies and case-control, V) systematic review of descriptive and qualitative studies, VI) single descriptive or qualitative study, and VII) opinion of authorities and / or expert committee report.

For the analysis of the articles included in this review, content analysis guided by the Bardin technique was used.¹¹ The presentation of the results was arranged in a schematic table. Finally, in the last stage, the guiding contents of the discussions were organized into a single category.

RESULTS

Three articles indexed in LILACS and two in CINAHL were found. The schematic chart 1 presents the characteristics of the selected studies, according to the titles, database, journal, year of publication, main considerations in the field of nursing and level of evidence.

Schematic Chart 1 - Characteristics of included studies following authors' name, database, journal, year, Nursing considerations, level of evidence. Rio de Janeiro, RJ, Brazil, 2018.

Titles	Database	Periodical Year	Thematic Considerations about nursing care	Level of Evidence
Preservation of arteriovenous fistula: joint actions between nursing and client. ¹²	LILACS	Esc Anna Nery 2013	Clients claim to know about caring for the preservation of AVF, but extensive home care is not followed by the majority of them. Nursing involvement with care guidelines for the preservation of AVF in hospitals, but with passive participation of clients.	IV
Interventions to promote self-care of people with arteriovenous fistula. ¹³	CINAHL	Journal of Clinical Nursing 2013	Teaching was identified as being a self-care promoter and the important contribution of nurses in patient education and reports on the division of self-care into 4 areas.	V
Valuation of self-care in vascular access for hemodialysis. ¹⁴	CINAHL	Nephrol Nursel 2015	The level of knowledge of AVF self-care was ambiguous. Reinforcing the role of nursing in health education.	IV
Knowledge: disease process in patients undergoing hemodialysis. ⁷	LILACS	Esc Anna Nery 2015	The patients presented adequate AVF care, but inadequate knowledge and practice.	IV
Perception of patients with chronic kidney disease regarding Care towards their hemodialysis access. ¹⁵	LILACS	Cogitare Enferm 2016	The need for strategies with the patient to acquire new skills to preserve access for hemodialysis.	IV

Source: Schemed by the authors.

Based on these articles, the analyzed data converged to create the following analytical category of the study: *Nursing care to clients with arteriovenous fistula*. In it, two decoding units were listed, named: "Incorporation of evidence on AVF to think about nursing care" and "Nurse's role in preserving AVF: thinking about self-care".

DISCUSSION

From the outset, it is appropriate to contextualize that clients with renal impairment live daily the expectation of undergoing hemodialysis treatment and that after each session their activities will resume as before the diagnosis of the disease. However, it does not always occur this way, they now have to live with the limitations arising from the treatment implemented with AVF. This forces us to discuss conceptual elements related to AVF as a way to seek clinical evidence to think about the implementation of nursing care.

First Decoding Unit: Incorporating Evidence on AVF to Think Nursing Care

Patients with CKD undergoing hemodialysis have concerns about the durability and maintenance of the functioning of AVF and stated that the main meaning attributed to AVF is the maintenance of life.¹⁶ However, changes in lifestyle should be performed, causing the individuals to overcome limitations and adaptations in their daily routines.

Clients consider AVF as a lifeline capable of renal replacement therapy and according to their relatives, AVF is a factor that causes restriction to daily activities, a fact that motivated the change in the dynamics of activities developed by clients, along with the core.¹⁷

Therefore, it is extremely important to include family members and people responsible for the client with CKD in the care to be performed for the maintenance of AVF, as well as the continuity of hemodialysis treatment, and the understanding of the new life condition of the treated person. And with that, the client must be able to understand the functioning of the AVF and the purpose of precautionary measures to avoid its inoperability.¹² The principle of substitution therapy is to promote the improvement of quality of life, rescuing physical well-being and cognitive capacity and keeping them inserted in the social context.⁵ The population submitted to HD is constantly facing the loss and changes in body image, and nursing care represented by the figure of the nurse must be able to recognize the view of the client with CKD in the environment inserted and promote care directed to the greatest needs of this patient regarding self-care and physical exercise, motivating better adherence to treatment.¹⁸⁻²⁰

Incorporation of evidence on AVF to think about the care provided by nurses has led to the promotion of

safe care, identifying its maturity and functionality, as well as the consequences generated by some procedural error during hemodialysis treatment. Moreover, it is opportune to point out the nurse's role in preserving the FAV and thinking of ways to invite customers to take care of themselves. This whole discussion can be evidenced in the second decoding unit, listed below:

Second Decoding Unit: Nurses' Role in AVF Preservation: Thinking of Self-Care

The first dimension to be considered in the role of nurses in preserving AVF focuses on popular health education: The nurse, as a health educator, and how this practice influences the improvement of the quality of life of the patient with AVF.¹⁴ However, in practice, the educational action is performed at the time of illness⁷, and not as a health promotion action.^{7,12}

When dealing with AVF, the nurse is related to the quality of life and maintenance of the clients' lives, pertinent to the adversities that may arise during the treatment¹⁶, besides the maintenance of the accesses that are extremely important for the procedures²¹. Most nurses working in the hemodialysis sector reported that they advise clients and family members, with a priority focus on newly admitted clients, in order to clarify doubts about the disease and treatment, and the use of leaflets and performance of lectures when possible. However, some professionals admitted that due to the shift they work, the aggregated functions and the work routine lead to distancing from the role of educator, being limited to guiding when approached.²¹

Educational actions implemented as nursing care should be carried out in a participatory manner, including the main agents, the client and his family or close people related to his care²². These actions generate great influence on the client's adherence to treatment, and this information is related to the practice of the extended clinic, of an individualized character, considering the reality of each client and the complexity of the health-disease process.²³

It is necessary to consider the qualification of the nurse, in the practical-assistance scope.¹⁵ It will be attributed to the nurse or nursing technician to perform the AVF puncture, when trained. It is exclusive attribution of the nurse to carry out the first puncture of AVF, preceded by proper evaluation of it. The trained nursing technician must perform the procedure under the guidance and supervision of the nurse.²⁴

The role of nurses in AVF focusing on infection control shows concern with: hygiene, maintenance of access and the importance of infection control²⁵. Thus, the need for preventive measures to be carried out is demonstrated and some of them are expressed in the schematic table 2.

Schematic Chart 2 - Preventive actions regarding the maintenance of AVF. Rio de Janeiro, RJ, Brazil, 2018.

General care

Perform hand hygiene before handling AVF
Do not use AVF before maturation
Guide the client to avoid FAV member efforts
Keep arm high when swollen
Guide for signs and symptoms of limb ischemia
Do not use AVF for blood collection or medication administration
Do not allow blood pressure check on the AVF member
Do not sleep on AVF

Before HD sessions

Perform AVF site asepsis before puncture
Guide on the signs and symptoms of infection
The healthcare professional should rotate the puncture sites to ensure AVF function if they do not use the buttonhole technique that is performed by puncturing the same site with a specific needle.

After the HD sessions

Keep the dressing at 4h-6h after hemodialysis and observe the site
Do not remove or remove hair and scabs formed in the AVF region.
Observe any changes in AVF, if positive seek medical and nursing staff
Perform arm and hand exercises to keep AVF functioning

Source: Arteriovenous Fistula Care (AVF): Guidelines for patients and caregivers.²⁵

Thinking about the role of nurses in the preservation of AVF with a view to self-care by clients and family members has improved the quality of life and well-being of the sick person to face the setbacks in the control of the disease and its treatment.

In this sense, self-care related to AVF can be divided into four moments: Self-care before construction, which consists in preserving the venous network of the limb to which the AVF will be built; self-care after AVF construction, aiming at preserving the access function, care with the dressing, identification of complications and possible complications; self-care during maturation, by performing exercises that encourage the development of AVF, and self-care during the hemodialysis session, preserving AVF, thus ensuring the quality of dialysis.¹³

It was possible to identify the deficiency in self-care with AVF⁷ mainly during the maturation period, presenting as care only the exercises with malleable object and avoiding overweight with the AVF limb.

In this relationship established by nurses to encourage clients to self-care, communication is essential. It is assigned to the nursing staff to inform and educate about the needs of care in the treatment of HD¹². Some clients indicated how satisfied they are with the nursing team's performance regarding communication, which is effective and able to facilitate treatment adherence.¹⁵

The stimulus for human abilities was recognized, providing a positive adaptation to the new lifestyle and

the client's control over their hemodialysis treatment¹⁵. Thus, it is up to the nurse to be a facilitator of the empowerment of his/her clients and family members, aiming to be the subjects of their own care and active protagonists in the transformations that have occurred in their lives resulting from the use of AVF and hemodialysis treatment.

CONCLUSION

Nursing care for patients with AVF has been a function of durability and maintenance of its operation, which is an extremely important route considered by customers as the factor of life maintenance.

In addition, nurses should teach family members responsible for direct care, especially in maintaining AVF and hemodialysis treatment. The nurse has the duty to obtain qualification in the theoretical and practical scope to ensure quality care and client confidence, providing greater adherence of the client to treatment.

The promotion of health education carried out by nurses and the need for their clinical look at the client is broadly related to adequate knowledge of good practices with AVF. Health education should be carried out continuously, not only in times of illness, placing clients as protagonists of treatment, in such a way as to provide self-care and strengthen the bond with the client, aiming to ensure a good and safe treatment.

Therefore, this review points to a lack of research on nursing care for patients with AVF, inviting Nephrology Nursing professionals to elaborate interventional research on this subject as a way to benefit the clients and the profession of today and tomorrow.

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