Experience of Daily Living with Arteriovenous Fistula for Hemodialysis

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Abstract. Objective: This research is a qualitative research to understand and describe the life experiences of a person living with arteriovenous fistula (AVF) for hemodialysis. Methodology: The participants were four patients receiving hemodialysis through AVF in a general hospital. Data were collected through individual in-depth interviews. The phenomenological method was used as an analysis method. Result: ‘Pain associated with complications’, ‘Life likened to tightrope walking’, and ‘Life branded as abnormal’ were demonstrated as three theme clusters. Seven themes: ‘Pain Like Driving a Nail into the Arm’, ‘Fistula Malfunction’, ‘Needling Point’, ‘Difficult Everyday Life’, ‘Feeling of heart pounding due to worry about blood vessels’, ‘Changed Body’, ‘My Shameful Body’ were derived. This research will provide useful data to understand the essence of the life experiences of a person living with AVF.

Keywords: Hemodialysis, Arteriovenous Fistula

1 Introduction

A patient treated with the hemodialysis therapy receives hemodialysis two to three times a week for four hours each time. To receive hemodialysis, the self-blood vessel, arteriovenous fistula (AVF), creating subcutaneous fistula between mutually adjacent artery and vein, arteriovenous graft (AVG) transplanting artificial blood vessel between artery and vein, or temporary central venous catheter is essentially needed. However, the complications associated with vascular access are not only the most common complications of a hemodialysis patient, but cause the highest medical cost (1). The complications are also the most important factor of hospitalization, taking up 70% of hospitalization associated with vascular access (2). In the nursing field, however, researches relevant to vascular access are lacking. Qualitative researches include the “Work Experience of Patients Undergoing Hemodialysis” (3) and “The Adjustment Process of Hemodialysis Patients: A Grounded Theory Approach” (4). As such, researches on the identification of the meaning of a hemodialysis patient’s experiences adapting to daily life are mainly carried out. However, no researches on the psycho-
logical and emotional matters experienced by the patients in relation with AVF are found. Therefore, this research aims to understand the life experiences of a person living with AVF from various perspectives, and grasps the participants’ vivid experiences.

2 Related Researches

2.1 Research Design

This research is a qualitative research to understand and describe the life experiences of a person living with AVF for hemodialysis therapy using phenomenological method.

2.2 Subject

The participants in this research were four adult patients aged 20 or older receiving hemodialysis therapy through AVF. Those who could communicate and express the experiences of AVF sufficiently, and agreed to the participation in this research were selected as the subject of this research.

2.3 Subject

This research received IRB, HYI-16-034-1 of H Hospital to collect data. After gaining the understanding and consent from the participants by explaining the objective and methodology of the research, an explanation that the interview details would not be used for other purposes except the purpose of this research, and that the participants could withdraw their participation was provided.

2.4 Data Collection

The interviews were conducted in a counseling room within the hemodialysis room, where patients cannot be disturbed for the interview in order to shape an environment through which the patients can express their opinions freely, or by a visit to a patient’s house, if a patient wanted such a visit. In consideration of a patient’s age and health status, the interview duration was set to 30-40 minutes per session, and the interview was conducted in one to two sessions, as necessary. The question starting the interview was “Tell us all about AVF freely.” When a patient found it difficult to answer the question, a direct question, “How do you feel after you had AVF for hemodialysis?” was asked.
2.5 Data Analysis

The collected data were analyzed using Colaizzi’s(5) phenomenological method.

3 Result

As a result of the data analysis, the life experiences of the patients with AVF were revealed as “pain associated with complications,” “life likened to tightrope walking” and “life branded as abnormal.”

Theme Cluster 1: Pain Associated with Complications

Theme 1: Pain Like Driving a Nail into the Arm
The participants receiving hemodialysis therapy tolerated pain like cutting skin with a knife during the needling in two AVF points with a 15G needle two to three times a week to receive hemodialysis.

I always put a pain relief patch here because I have severe pain (Participant 2). When I touch my hand on the point where the needle was inserted on the day when I did not come to the hospital, I feel pain (Participant 4).

Theme 2. Fistula Malfunction
“Always live with the concern, worry, and anxiety on what I should do if AVF is blocked.” When AVF is blocked, the patients are transferred to a tertiary hospital, and they get various treatments such as thrombectomy, which causes lots of cost. Therefore, those patients experience double pain due to high economic burden.

I always live on this side. The treatment costs a lot (from KRW 500,000 to KRW 750,000) if AVF is blocked. I got thrombectomy four or five times, but now I have another up here (Participant 2).

I should not lift heavy things. I am careful, and I should not bump against something... (silence) (Participant 3).

Theme 3. Needling Point
The patients’ family are sometimes surprised at sudden bleeding at the needling point at home. Therefore, the participants use their-desired hemostatic methods in some cases.

Blood frequently comes out around the needling point. If blood dries and stays on the gauze, after bleeding was completely stopped, blood comes out a bit when the gauze is detached, and I stop the bleeding and apply an ointment. In this way, bleeding stops (Participant 3).

I am sometimes surprised at my bruised arm after receiving hemodialysis because I hadn’t noticed it initially (Participant 4).

Theme Cluster 2: Life Likened to Tightrope Walking

Theme 1. Difficult Everyday Life
The patients are affected a lot by social and psychological functions on the diverse
and fundamental changes in lifestyle including strict and complex dietary management and fluid control required for hemodialysis patients, and they feel difficulties.

I cannot exercise, have no energy to do something, and it is difficult to walk (Participant 2).

It is so much painful. I am distressed because I cannot live like a human. I cannot do many things as I want. I cannot go to places where I want to, and cannot eat what I want to (Participant 3).

**Theme 2. Feeling of heart pounding due to worry about blood vessels**

Patients receiving hemodialysis with Arteriovenous fistula (AVF) always live with anxiety and worry about not receiving hemodialysis, when an AVF problem is caused, as if living is like tightrope walking.

I am always worrying about my artery being blocked. I feel uncomfortable when I sleep as well. I cannot lift a heavy thing, no never, because my blood vessels are weaker than those of others. I am always careful. I should not touch, lift heavy stuff, bump against something... (silence) (Participant 2).

**Theme Cluster 3: Life Branded as Abnormal**

**Theme 1: Changed Body**

I am asked whether I am a Filipino, although I am a Korean. There are many things that I need to overcome due to the disease. However, “life branded as abnormal” is regarded as more painful to the patients who have to live with a changed blackish face.

A person asks about the reason why my face is not so blackish, as someone that he knows who is in his 40s is distressed because the person is asked whether he is a Filipino, due to his blackish face. Well, I think I am actually fortunate, compared to the person (Participant 2).

Because my face has become blackish, people indifferently ask whether I am from the Philippines. But, I am so distressed (Participant 3).

**Theme 2. My Shameful Body**

The AVF blood vessel protruding between the wrist and elbow, as time goes on, can be my life line, but I also think it is my secret body part that I do not want to show to anyone.

I cannot wear short-sleeved shirt in summer. When I go to a public bath, people ask me why this part looks like what it is. Then, I just say, well... (Participant 2). I cannot show this part in summer because I am ashamed. I cover this part in summer (Participant 3).

If someone looks at this part carefully, there are needle marks. As I ride a subway, when someone stands/sits next to me, he/she looks at the part... (silence) (Participant 4).
4 Discussion

Theme cluster 1 is “Pain associated with complications.” Patients should tolerate pain due to needling like the insertion of a large nail upon every hemodialysis. The most fundamental and important condition to retain hemodialysis therapy is to secure adequate blood flow. However, the patients suffer from psychological and physical pain, along with huge medical costs, due to AVF dysfunction. Such a result was revealed in the research of Kim (6). In light of such a problem, various support measures for the improvement of a hemodialysis patient’s life need to be devised.

Theme cluster 2 is “Life likened to tightrope walking.” The patients are affected a lot by social and psychological functions on the diverse and fundamental changes in lifestyle including strict and complex dietary management, fluid control, and AVF management, which are required for hemodialysis patients, and they feel difficulties. In the research of Tong et al., (7), dietary management and fluid control are the key self-nursing points for hemodialysis patients; however, they are revealed to be a highly difficult and painful process. Therefore, a nurse needs to offer education in consideration of individual awareness and knowledge to practice dietary management and fluid control.

The theme cluster 3 is “Life branded as abnormal.” The participants were much hurt by their external appearance due to the disease. The end-stage renal disease patients gradually avoided human relationships more due to the blackish change in their skin color and their wickedly protruding AVF; they also complained about psychological difficulties. In this regard, self-help meetings need to be activated so that hemodialysis patients can lead a hemodialysis life relying on each other, and they can improve their quality of life by adapting to their social life.

5 Conclusions

This research is a qualitative research describing the life experiences of the participants in this research in detail through a phenomenological method to identify the essence of the life experiences of people living with AVF. This research drew three theme clusters: “pain associated with complications,” “life likened to tightrope walking,” and “life branded as abnormal.” The findings in this research can be used as useful data on the life experiences of people living with AVF.

References