

## **Reversible Signs and Symptoms, Post-Hemodialysis**

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### **ABSTRACT**

This study tried to determine what signs and symptoms were reversed among the End Stage Renal Disease (ESRD) patients post hemodialysis. The design used was a descriptive study. Sixty-four (64) ESRD patients who had undergone hemodialysis were the respondents. Purposive sampling was used. It utilized an interview method guided by a self-made questionnaire. The data were statistically tested using T-test of correlated means. Findings of the study revealed that the signs and symptoms that were reversed according to rank and rated by the respondents as strongly disagreed were the following; 1.) extreme fatigue, 2.) sleep disturbances, 3.) chest pain, 4.) anorexia, 5.) full bounding pulse, 6.) abdominal bloating, 7.) headache. Signs and symptoms which were not reversed according to rank were the following 1.) amenorrhea, 2.) pale, bronze, gray, yellow skin, 3.) restless leg syndrome, 4.) decreased urinary frequency, 5.) Impotence, 6.) decrease libido, 7) Cough, 8) Shortness of breath. Findings of the study made the respondents and the significant others highly motivated to continue with hemodialysis in spite the exorbitant cost incurred due to the realization of the reversible signs and symptoms the patient experienced post hemodialysis.

## KEYWORDS

Health, , Post Hemodialysis, Reversible Signs and Symptoms, Descriptive Design, Philippines, Asia

## INTRODUCTION

Marieb (2004) states that the main function of the kidney is to filter the blood of different toxins, nitrogenous waste products and excrete these in the urine. However, when the kidney is damaged as ESRD, there is an accumulation of waste products, thus, resulting in the manifestations of different signs and symptoms involving almost all organs and systems of the body, such as gastrointestinal, circulatory, excretory, respiratory, integumentary, reproductive systems. It also affects the fluid and electrolyte balance.

It is then empirical to remove the accumulated nitrogenous waste products through hemodialysis treatment or else the patient will die. Hemodialysis act as an “artificial kidney”, which will remove the nitrogenous waste products making the patient’s blood already cleansed, relieving the signs and symptoms after dialysis.

To avail of a hemodialysis treatment, it calls for a big decision by the patient together with his family for it involves an exorbitant cost. It may mean many restrictions, lifestyle changes and alterations of one’s schedule because the procedure takes three to five hours. However, in spite of these constraints, the patient clings to hemodialysis for it is his only chance to tie with life and to the society where he belongs.

The researchers attempted to determine the signs and symptoms experienced by ESRD patients, pre hemodialysis and those signs and symptoms which were reversed post hemodialysis. The findings of this study would provide evidence-based data of benefits obtained by ESRD patients post hemodialysis. . The patient would feel that there is a return of investment from such very expensive mode of treatment. The family would be motivated continuously to support the patient emotionally and financially, thus, maintaining the momentum of availing hemodialysis consistently.

## Theoretical background

This study is anchored on the Self-Care Deficit Theory formulated by Dorothea Orem 2004. A major form of this theory is the appraisal of the client’s ability to meet self- care needs or the ability to take care of oneself , the ability to meet one’s need independently .When a client cannot meet one’s need independently ,the client

exhibits what Orem identified in her theory as self-care deficit. The client needs to be taken care of by others, like the significant others and nurses, for there is evidence of self-care deficit. This self-care deficit is very evident among newborns, infants, elderly, disabled, those who are having a disease, sick and ESRD patients are not an exemption.

ESRD patients manifests signs and symptoms such as chest pain, nausea and vomiting, fatigue weakness which may result to self-care deficit or the inability of the ESRD patient to meet one's need independently. ESRD patients require others to take care of themselves

The researchers also anchored on the theory of Fourteen Basic Needs proposed by Virginia Henderson 2004. The researcher focused only to the physical needs of the patient which can be altered because one has an ESRD. Henderson views nurses as substitute help and partner for the patient. Henderson views the ESRD patient as an individual who requires assistance in achieving self-care needs, to achieve health and independence and if not possible, gain a peaceful death.

## **Related Literature**

As Moreb 2004 pointed out, dialysis is a process by which waste products are removed from the blood, and excess fluid is removed from the body. There are two types of dialysis: hemodialysis and peritoneal dialysis.

As discussed by Gutch 2000 in the conducted study on Review of Dialysis for Nurses and Dialysis Personnel, it specified that because of the removal of fluid and waste products during dialysis, patient may experience the following; drop in blood pressure, lightheadedness or headaches, nausea, muscle cramps, feeling tired and "washed out afterward.

In a family forum entitled "A Short History of Dialysis in the United States," Hall, 2002 expressed that the above mentioned occurrences happened especially in the first few dialysis treatments, but as a person's body gradually adjust to dialysis, the symptoms often improve or disappear. Many people reported that patients feel better after starting dialysis, because swelling is reduced; appetite improves, and energy level increases.

## **RESEARCH METHODOLOGY**

The study employed the descriptive method among the 64 respondents who were diagnosed of End Stage Renal Diseases and had undergone hemodialysis in the Governor Celestino Gallares Memorial Hospital and Ramiro Community Hospital,

both in Tagbilaran City, Bohol, Philippines. Out of 64 respondents there were about 45 respondents who were males and about 19 respondents who were females.

The researchers had utilized an interview schedule making use of self-made questionnaire. The questionnaire had a list of signs and symptoms categorized the different systems of the body. The researchers had utilized the Likert-type scale from among the list of signs and symptoms, the respondents will indicate their degree of agreement, that is, whether they “strongly agree” or “strongly disagree” on the different signs and symptoms felt. It was also asked whether the specific signs and symptoms were experienced pre hemodialysis and what were reversed post hemodialysis. When the respondents answered moderately disagree to strongly disagree, post hemodialysis, these were the signs and symptoms which were reversed.

To determine whether there is a difference on the signs and symptoms felt pre hemodialysis and post hemodialysis, the researchers used the inferential statistics of T-test to determine whether the null hypothesis; “There are no significant reversible signs and symptoms post hemodialysis” is accepted or rejected.

## RESULTS AND DISCUSSION

Table I. Signs and symptoms pre and post hemodialysis

ITEMS	Pre Hemodialysis		Post Hemodialysis		Mean Difference
	Weighted mean	Description	Weighted mean	Description	
<b>1. Activity/Rest</b>					
a. Extreme fatigue, weakness	2.98	Moderately Agree	1.48	Strongly Disagree	1.5
b. Sleep disturbances, insomnia, restlessness	2.68	Moderately Agree	1.50	Strongly Disagree	1.18
<b>Composite mean</b>	<b>2.83</b>	<b>Moderately Agree</b>	<b>1.49</b>	<b>Strongly Disagree</b>	<b>1.34</b>
<b>2. Circulation</b>					
a. chest pain	2.76	Moderately Agree	1.52	Strongly Disagree	1.24
b. full bounding pulse	2.82	Moderately Agree	1.60	Strongly Disagree	1.22

c. pallor, bronze gray, yellow skin	2.93	Strongly Agree	2.84	Moderately Agree	0.09
<b>Composite Mean</b>	<b>2.83</b>	<b>Moderately Agree</b>	<b>1.65</b>	<b>Strongly Disagree</b>	<b>1.18</b>
<b>3. Elimination</b>					
a. decrease urinary frequency	3.35	Strongly Agree	2.73	Moderately Agree	0.62
b. constipation	2.81	Moderately Agree	2.57	Moderately Agree	0.24
<b>Composite Mean</b>	<b>3.08</b>	<b>Moderately Agree</b>	<b>2.65</b>	<b>Moderately Agree</b>	<b>0.43</b>
<b>4. Food/Fluid</b>					
a. Anorexia	2.93	Moderately Agree	1.58	Strongly Disagree	1.35
b. nausea and vomiting	3.43	Strongly Agree	2.21	Moderately Disagree	1.22
<b>Composite mean</b>	<b>3.17</b>	<b>Moderately Agree</b>	<b>1.89</b>	<b>Strongly Disagree</b>	<b>1.28</b>
<b>5. Neurosensory</b>					
a. headache	2.50	Moderately Agree	1.68	Strongly Disagree	0.82
b. restless leg syndrome	2.90	Moderately Agree	2.84	Moderately Agree	0.06
<b>Composite Mean</b>	<b>2.70</b>	<b>Moderately Agree</b>	<b>2.26</b>	<b>Moderately Disagree</b>	<b>0.44</b>
<b>6. Respiration</b>					
a. shortness of breath	2.93	Moderately Agree	2.57	Moderately Agree	0.36
b. productive cough	2.48	Moderately Agree	2.29	Moderately Disagree	0.19

<b>Composite mean</b>	2.70	<b>Moderately Agree</b>	2.43	<b>Moderately Disagree</b>	0.27
<b>7. Integumentary</b>					
a. itchiness of the skin	3.43	Strongly agree	2.37	Moderately Disagree	1.06
b. petechiae	2.01	Moderately Disagree	2.28	Moderately Disagree	-0.27
<b>Composite mean</b>	2.72	<b>Moderately Agree</b>	2.32	<b>Moderately Disagree</b>	0.4
<b>8. Sexuality</b>					
a. decrease libido	2.56	Moderately Agree	2.65	Moderately Agree	-0.09

Table I revealed that there were signs and symptoms post hemodialysis that were rated by the respondents as Strongly Disagree with a weighted mean of 1.48-1.68. These signs and symptoms were the following and arranged according to rank: 1) extreme fatigue 2.) sleep disturbances 3.) chest pain 4.) anorexia 5.) full bounding pulse 6.) abdominal bloating 7.) headache.

There were also signs and symptoms post hemodialysis that were rated as Moderately Disagree with a weighted mean of 2.21-2.37. These signs and symptoms were the following arranged according to rank: 1.) nausea and vomiting 2.) petechiae 3.) productive cough 4.) itchiness of the skin.

Table I, also revealed that the signs and symptoms with a composite mean described as Strongly Disagree were those involving activity and rest, circulation (chest pain, full bounding pulse), food fluid (anorexia), neurosensory (headache). These were the reversible changes experienced by the patients after the hemodialysis.

As shown also in the table, there were signs and symptoms which were rated as Moderately Agree by the respondents, which means that they were not reversed post hemodialysis. The following signs and symptoms arranged according to rank were: 1.) amenorrhea 2.) pale, bronze, gray, yellow skin, 3.) restless leg syndrome 4.) decreased urinary frequency 5.) impotence 6.) decreased libido 7.) constipation 8.) shortness of breath.

The body systems that showed a composite mean being described as Moderately Agree by the respondents were those affecting the excretory system particularly urinary and fecal elimination and reproductive system involving one's sexuality. These were the body systems which did not undergo reversible changes post hemodialysis. These findings affirm the study that physiologic factors resulting to impotence, amenorrhea,

and decreased libido are due to uremic, toxins, neuropathy, and medications (antihypertensive drugs). Men may also experience testicular atrophy (decreases cells), oligospermia (decrease sperm production and reduced sperm motility (Porch, 2006).

The data in table I, pre and post hemodialysis were subjected to t-test correlation. The computed t- value of 3.84 is found to be higher than the critical value of 2.14 at 14 df at 0.05. level of significance, thus indicating that there was a significant degree of difference in the pre and post hemodialysis responses in the signs and symptoms felt, hence the null hypothesis was rejected. The respondents had experienced reversible signs and symptoms, post hemodialysis.

## CONCLUSION

There were signs and symptoms that were reversed post hemodialysis .These were extreme fatigue, sleep disturbances, chest pain, anorexia, full bounding pulse ,abdominal bloating headache, nausea and vomiting productive cough, itching and petechiae. However, not all of the signs and symptoms were reversed post hemodialysis. These signs and symptoms were amenorrhea, pale bronze, gray, yellow skin, restless leg syndrome decrease urinary frequency, impotence, decreased libido, constipation, and shortness of breath. The body systems which underwent reversible changes were those involving the musculoskeletal system affecting activity and rest, circulatory system and gastrointestinal system. The body systems which did not undergo reversible signs and symptoms were those involving the excretory system, particularly urinary and fecal elimination, and reproductive system involving one' sexuality.

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