

Evaluation of the Importance of Patient Education in Peritoneal Dialysis

Periton Diyalizinde Hasta Eğitiminin Öneminin Değerlendirilmesi

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Abstract

Aim: Peritoneal dialysis is the type of renal replacement therapy which requires active participation of the patient; therefore, the education of the patient is of major importance. We aimed to evaluate objectively the importance of continuation of education in patients on peritoneal dialysis (PD).

Methods: Thirty patients included in our study were asked to perform two questionnaires before and after an education session lasting about 45 minutes. The questions were about the functions of the kidneys, renal failure and PD techniques in the first one, and peritonitis, hypervolemia and nutrition in the second questionnaire. The numbers of correct answers before and after the education were compared.

Results: The mean number of correct answers raised from 5.48 ± 1.7 to 6.26 ± 1.6 with the education in the first ($p=0.002$) and from 5.14 ± 1.5 to 7.14 ± 0.9 in the second questionnaire ($p<0.001$). Although there was a significant improvement with education, it was more obvious in the second questionnaire, suggesting better performance of both the teaching nurses and patients. In the first questionnaire, fifteen patients' results improved with the education, while correct answers did not change in six of them. The number of correct answers increased in nineteen patients, while in three of them it did not change in the second questionnaire.

Conclusion: The success rate of about only 60% in a test performed during the following months of treatment, in spite of a dense education program at the beginning of the dialysis, shows that this education must be repeated regularly. (*The Medical Bulletin of Haseki 2010; 48: 14-7*)

Key Words: Peritoneal dialysis, patient, education

Özet

Amaç: Periton diyalizi (PD) hastanın tedaviye aktif katılımının en çok gerektiği; o nedenle de hasta eğitiminin en önemli olduğu renal replasman tedavisi tipidir. Çalışmamızda PD hastalarında eğitimin sürekliliğinin önemini objektif olarak göstermeyi amaçladık.

Yöntemler: PD ünitemizde takipli otuz hasta çalışmamıza dahil edildi ve yaklaşık kırk beş dakika süren bir eğitim programından sonra iki farklı anketteki soruları cevaplamaları istendi. İlk anketteki sorular böbreklerin görevleri, böbrek yetersizliği, ve PD teknikleri konusunda; ikinci anketteki sorular ise peritonit, hipervolemi ve beslenme ile ilgili idi. Eğitim öncesi ve sonrası doğru cevap sayıları karşılaştırıldı.

Bulgular: Ortalama doğru cevap sayısı eğitim sonrası ilk ankette 5.48 ± 1.7 'den 6.26 ± 1.6 'ya ($p=0.002$); ikinci ankette ise 5.14 ± 1.5 'den 7.14 ± 0.9 'a yükseldi ($p<0.001$). İlk ankette on beş hastanın doğru cevap sayısı artarken altı hastada değişmedi. İkinci ankette ise on dokuz hastanın doğru cevap sayısı artarken üç hastanınki değişmedi.

Sonuç: Diyalizin başlangıcında uygulanan yoğun eğitim programına rağmen, ilerleyen aylarda uygulanan bir ankette yaklaşık başarı oranının %60 olması eğitim programının düzenli olarak tekrarlanması gerektiğinin bir göstergesidir. (*Haseki Tıp Bülteni 2010; 48: 14-7*)

Anahtar Kelimeler: Periton diyalizi, hasta, eğitim

Introduction

The incidence of end-stage renal disease (ESRD) is increasing worldwide. The choice of renal replacement therapy depends on many factors such as socioeconomic status and cultural habits, medical conditions, availability of

the treatment modalities and patients' awareness of the three renal replacement therapies. It is now well recognized that a pre-dialysis education program should be an integral part of care for patients with ESRD (1,2). Through such a program, information about the disease process, the different treatment modalities, the diet and drug

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Received/Geliş Tarihi: 16.10.2009 **Accepted/Kabul Tarihi:** 30.10.2009

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prescriptions, etc. can be supplied to the patient and his/her family; therefore, that they can make a proper choice of the type of renal replacement therapy.

Peritoneal dialysis (PD) is the type of renal replacement therapy, which requires active participation of the patient and that is why the education of the patient is of major importance. The role of patient education in the choice of the type of renal replacement therapy has been shown by many studies (3-5). On the other hand, there are studies showing that we are not fully successful. In a study carried out in USA with 1365 patients, it was shown that the rate of unawareness of peritoneal dialysis, home hemodialysis, and transplantation was 66, 88% and 74% respectively (6).

Peritoneal dialysis (PD) offers the opportunity of a better quality of life for patients as long as they are able to perform dialysis according to the set procedure. A standard training by means of lectures, short films and practices with models is given to all our patients just before and after the implantation of the PD catheter. However, as shown by previous studies, besides the pre-dialysis education, it is important to continue the education program after the onset of renal replacement therapy (7,8). Our aim in this study was to assess the change in PD patients' knowledge about their treatment and to evaluate the importance of continuous education program among incident patients on PD.

Methods

Thirty patients (12 automated PD and 18 continuous ambulatory PD) followed in our PD unit were included in the study. As a part of the continuous education program of our PD unit, the patients were invited to participate in two refreshment sessions given by the staff. At the beginning of the sessions, they were asked to fill in two separate questionnaires which included eight questions, seven being with multiple choices. The first questionnaire included questions about the functions of the kidneys, renal failure and PD techniques, while the second one was about hypervolemia, peritonitis and nutrition. Education sessions were concentrated on the topics asked in the questionnaires preceding them.

Questionnaire-1

1. Which of the following is not among the functions of the kidneys?

- It regulates blood pressure and production of blood
- It produces urine and excretes harmful materials from the body
- It regulates fluid status and helps formation of healthy bones
- It regulates blood sugar levels

2. What are the signs of renal failure?

- Fatigue, sleepiness, distorted concentration
- Nausea, vomiting, decreased appetite and increased blood pressure
- Edema, itching and discoloration of the skin
- All

3. What are the advantages and disadvantages of peritoneal dialysis?

4. What is the first thing to do when starting an exchange?

- Wash hands for three minutes
- Flush the lines
- Prepare the table
- Open the package of the solution

5. Which of the following is the sign of exit-site infection?

- Swelling, redness
- Pain
- Purulent discharge
- All

6. Which of the following should not be done during bath?

- Close the exit site with a waterproof plaster
- Have a shower at upright position
- Clean the exit site gently with a soft cloth
- All

7. How should the room in which dialysis is performed be cleaned?

- It should be cleaned every other day
- Only the table and serum hanger should be cleaned
- It should be cleaned every day
- It should be cleaned before every change

8. Which of the following is caused by constipation?

- Distorted drainage of the solution
- Distorted filling and drainage of fluid
- It causes bloody solution
- All

Questionnaire-2

1. What is peritonitis?

2. What causes peritonitis?

- Not washing hands for three minutes
- Coughing or sneezing during connection
- Touching the tip of the catheter with bare hands
- All

3. How do you understand that you have peritonitis?

- Turbid fluid
- Abdominal pain and fever
- Nausea and vomiting
- All

4. How should you regulate your water intake?
5. What are the signs of volume overload?
- Increased weight, shortness of breathe
 - Increased blood pressure
 - Swelling of the hands, feet and face
 - All
6. What is the consequence of insufficient fluid intake?
- Decrease in weight
 - Decrease in blood pressure, vertigo, and lassitude
 - Dry mouth, dry skin, muscle cramps
 - All
7. Which of the following should be applied in the nutrition plan?
- Red meat thrice a week, white meat twice a week
 - Two egg whites every day and white meat once a week
 - No salt
 - All
8. Which of the following is wrong about cooking?
- Chopping the vegetables into small pieces, boiling them and throwing out the juice of the vegetables
 - Making the foods more tasty with spices
 - Frying and roasting the foods
 - All

The first questionnaire was filled in by 23 patients, while the second one by 22 patients. Fifteen patients performed both questionnaires, while the other fifteen preferred participating only in one questionnaire and subsequent education session.

Questionnaires were repeated right after an education session lasting about 45 minutes and the number of correct answers before and after the education was compared.

Statistical analysis was performed by SPSS for Windows software, version 13.0. All data were expressed as mean \pm SD for normally distributed data and median or range for skewed data. Statistical comparisons were performed using unpaired student's t-test. A p value <0.05 was considered as statistically significant.

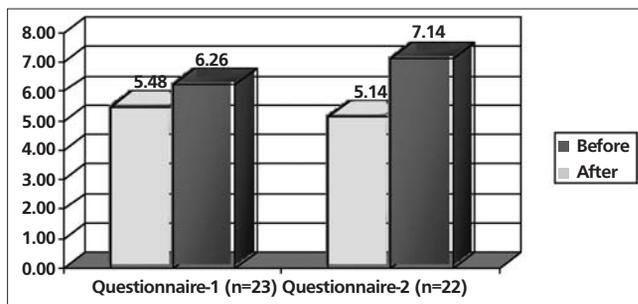


Figure 1. The number of correct answers before and after the education session

Results

The mean age and the duration of PD of 23 patients performing the first questionnaire were 43.0 \pm 14.5 years and 31.0 \pm 10.9 months, respectively. Of the 22 patients performing the second test, the average age was 44.1 \pm 13.9 years, and the duration of peritoneal dialysis was 29.2 \pm 11.0 months.

The number of correct answers given to the questions in the first questionnaire before and after the education session were 5.48 \pm 1.7 and 6.26 \pm 1.6, respectively (Figure). The difference between the number of correct answers before and after the session was statistically significant ($p=0.002$). The results of fifteen patients improved with the education, while the correct answers did not change in six of them. Two patients answered fewer questions correctly after the education. The question of 'What is the first thing to do when starting an exchange?' was the one, most commonly answered incorrectly.

The number of correct answers in the second test increased from 5.14 \pm 1.5 to 7.22 \pm 0.97 after the education (Figure 1). This increase in the number of correct answers was also statistically significant ($p<0.001$). The number of correct answers increased in nineteen patients, while in three of the patients it did not change. Twelve patients reached 100% success rate. Questions which were most commonly answered incorrectly were those about hypervolemia.

Discussion

The aim of our study was to explore the effect of continuous education throughout the treatment. As a general observation,, both the patients and the educators were more successful in the second test (Figure). The success rate of about only 60% in a test performed in the following months of treatment, in spite of a dense education program at the beginning of the dialysis, shows that this education must be repeated regularly. This finding supports the idea that an intense education program is not sufficient for further years, even after months of therapy; instead, it should be repeated regularly. It is a point of disappointment that although the success rate has increased with the education session, it did not reach 100%. The lower number of correct answers to questions in the first test, which were about basic techniques of PD, warned us that education program should be concentrated on these topics.

Education of patients on PD should be continuous and repetitive teaching sessions should be programmed for each patient.

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