



PERITONEAL DIALYSIS: SELF-CARE ACTION TAKEN BY PATIENTS

PERITONEAL DIALYSIS: SELF-CARE ACTIONS DEVELOPED BY PATIENTS

PERITONEAL DIÁLISIS: ACCIÓN AUTOCUIDADO ADOPTADAS POR LOS PACIENTES

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ABSTRACT

Objectives: to describe the socio-demographic profile of patients submitted to peritoneal dialysis and to identify the actions of self-care performed. **Method:** descriptive, transversal study with a quantitative approach, performed at a nephrology clinic in the state of Sergipe. The data collection was executed from March to May of 2010, after evaluation and approval of the project by the Ethics Committee in Human Research of the Federal University of Sergipe by the CAAE under protocol no. 0505.0.000.107-10. There were 76 patients interviewed, older than 12 years of age, on dialysis by Continuous Ambulatory Peritoneal Dialysis and Automated Peritoneal Dialysis. The data were analyzed with Microsoft Excel 2007 and presented in tables. **Results:** it was identified that most patients were female; between 18 and 59 years of age, incomplete elementary school, unemployed with a per capita income less than one minimum wage and one to three years in the dialysis program. Although the majority followed the instructions received, a deficit was noticed in following the protocol established by the clinic for: hand washing, drying the catheter, outlet using ironed towels, sunbathing, applying ointment on the catheter outlet, performing the hydric and diet control. **Conclusion:** the partial adherence to self-care actions demonstrates the need of constant monitoring and reorientation by nurses to provide a greater knowledge, awareness and patient adherence to the treatment needed. **Descriptors:** peritoneal dialysis; self care; renal insufficiency, chronic; nursing.

RESUMO

Objetivos: descrever o perfil sócio-demográfico dos pacientes submetidos à diálise peritoneal e identificar as ações de autocuidado realizadas. **Método:** estudo descritivo, transversal, com abordagem quantitativa, realizado em uma clínica de nefrologia do estado de Sergipe, Brasil. A coleta dos dados foi realizada no período de março a maio de 2010, com 76 pacientes entrevistados, com idade a partir de 12 anos, em tratamento dialítico por Diálise Peritoneal Ambulatorial Contínua ou Diálise Peritoneal Automática. Os dados foram processados no programa Excel 2007 e apresentados em tabelas. O estudo teve o projeto de pesquisa avaliado e aprovado pelo Comitê de Ética em Pesquisa da Universidade Federal de Sergipe com o parecer CAAE de nº 0505.0.000.107-10 **Resultados:** identificou-se que a maioria dos pacientes era do sexo feminino, idade entre 18 a 59 anos, ensino fundamental incompleto, não exercem atividade remunerada, com renda per capita inferior a 01 salário mínimo e encontra-se de 01 a 03 anos no programa de diálise. Apesar de a maioria seguir as orientações recebidas, evidenciou-se deficiência no seguimento ao protocolo estabelecido pela clínica para: lavagem das mãos, secagem do orifício de saída do cateter, utilização de toalha passada, realização do banho de sol, aplicação de pomada no orifício de saída do cateter, realização do controle hídrico e controle dietético. **Conclusão:** a adesão parcial às ações de autocuidado demonstra a necessidade de constante acompanhamento e reorientação por parte do enfermeiro, para favorecer maior conhecimento, sensibilização e adesão do paciente ao tratamento necessário. **Descritores:** diálise peritoneal; autocuidado; insuficiência renal crônica; enfermagem.

RESUMEN

Objetivos: describir perfil sociodemográfico de pacientes sometidos a diálisis peritoneal e identificar acciones de autocuidado realizadas. **Método:** estudio descriptivo, transversal, con abordaje cuantitativo, realizado en una clínica de nefrología del estado de Sergipe. Se realizó la colecta de datos entre marzo y mayo de 2010, tras evaluación y aprobación del proyecto por el Comité de Ética en Pesquisa en Seres Humanos de la Universidad Federal de Sergipe bajo CAAE nº 0505.0.000.107-10. Se entrevistó 76 pacientes, con edad a partir de 12 años, en diálisis por Diálisis Peritoneal Ambulatoria Continua o Diálisis Peritoneal Automatizada. Los datos fueron procesados por el programa Excel 2007 y presentados en tablas. **Resultados:** se identificó que la mayoría de los pacientes era del sexo femenino, entre 18 a 59 años, enseñanza fundamental incompleta, no ejercen actividad remunerada, con renta per capita inferior a 01 salario mínimo y se encuentra de 01 a 03 años en diálisis. A pesar de la mayoría seguir las orientaciones recibidas, se evidenció deficiencia en el cumplimiento del protocolo establecido por la clínica para: lavado de las manos, secar el orificio de salida del catéter, utilización de toalla pasada, baño de sol, aplicación de pomada en el orificio de salida del catéter, realización del control hídrico y dietético. **Conclusión:** la adhesión parcial a las acciones de autocuidado demuestra la necesidad de constante acompañamiento y reorientación por parte del enfermero, para favorecer mayor conocimiento, sensibilización y adhesión del paciente al tratamiento necesario. **Descriptor:** diálisis peritoneal; autocuidado; insuficiencia renal crónica; enfermería.

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INTRODUCTION

Chronic kidney disease (CKD) has high morbidity and mortality, the incidence and prevalence has increased progressively in epidemic proportions throughout the world. In spite of numerous efforts to collect data about terminal CKD in Brazil, it was observed that, from an epidemiological point of view, the data are still underreported.¹

Chronic Renal Failure (CRF) occurs when there is a state of persistent renal dysfunction and irreversible, commonly due to a slow progressive pathological process.² In this context, the use of an effective method to remove uremic body fluid and waste products is necessary when the kidneys cannot do so and this should be initiated when the creatinine clearance falls below 10 ml/min.³

The principal methods of renal replacement therapy are hemodialysis and the various forms of peritoneal dialysis: various forms of peritoneal dialysis: intermittent (IPD), the continuous ambulatory (CAPD) and automated (APD). It is estimated that more than 70% of cases of renal dysfunction in adults are due to hypertension and diabetes mellitus. More than 10% of cases are caused by chronic glomerulonephritis, cystic disease and urologic disorders; however, in 15% of cases the cause of the problem cannot be established.²

The dialysis indication occurs when the conservative treatment, dietary restriction and drug treatment, is ineffective in maintaining the patient's quality of life. In these cases, the PD and the therapeutic alternative which preserves the residual function of the kidney, controls blood pressure levels, hematological and provides hemodynamic stability.⁴ Currently the PD and the modality used in 9.4 % of patients with CKD in the dialysis program in Brazil.⁵ In DP the dialysis solution is introduced into the abdominal cavity and filtration of toxic products that move blood to the dialysis solution occurs, by means of diffusion and ultra-filtration, whose waste products and excess water are removed by drainage of the dialyzed fluid.⁶

In this type of therapy, the patient is the primary responsible for the quality of their treatment, i.e. performing self-care. For both, the patient and their family members require supporting bonds in the care construction, of which education for both the patient and the family or caregivers, for the correct procedure execution and the adoption

of appropriate hygiene habits are important measures in the prevention of complications.⁷⁻⁸

The self-care is translated as the practice of activities, initiated and performed by individuals, for their own benefit, for the maintenance of life, health and well-being of the patient.⁹ Educational activities relating to self-care are normally carried out by the nurse having as main objectives driving patients to independence in matters of health and essential care understanding for well-being preservation.¹⁰

In the clinical study, during training for nurses, patients and their family members, they receive guidelines related to self-care with respect to the washing of hands, use of mask, and care with the catheter outlet, among others. Information, skills, and, in particular, behavioral changes, are necessary for successful adaptations, avoiding loss of control that can occur when there is not suitable training.¹¹

The patient who chooses outpatient therapy needs to learn exactly how to develop the dialysis procedure, whereas the patient who chooses hospital care only needs to understand the concepts without practicing the procedure.¹¹ Therefore, it is necessary to involve the patient in the treatment in order to seek a behavioral change and improvement in the selected treatment results.

This study aims to describe the socio-demographic profile of patients undergoing peritoneal dialysis and to identify self-care actions performed.

It is expected that, this study contributes to the qualification the nursing practice which assists patients with chronic renal failure on peritoneal dialysis treatment and allow the knowledge of actions developed in everyday self-care, enabling supported nursing care in health education.

METHOD

Descriptive study, with a quantitative approach, developed in a nephrology clinic in the state of Sergipe. Data collection was carried out in the period from March to May 2010, with a sample of 76 patients, after the meeting the inclusion criteria: has ODA or DPAC, over 12 years of age, does not have any type of cognitive limitation preventing them completion of the self-care and sign the consent form (ICF). Patients under the age of 18 years had the ICF signed by parents or legal guardians.

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The chosen technique for obtaining the data was a semi-structured interview with the patient and closed question questionnaire, where aspects of the social and demographic characteristics and self-care actions were highlighted. The inherent questions on self-care were divided in two parts: answers obtained directly from patients and by means of observation on the part of the researchers.

The data were tabulated and analyzed in Microsoft Excel 2007. The results were presented in tables and described in absolute numbers and percentages.

The study was the research project evaluated and approved by the Research Ethics Committee of the Federal University of Sergipe with the CAAE protocol No. 0505.0.000.107-10. For the entire study the determinations of Resolution 196/96¹² of the National Health Council (CNS) that regulates the research involving human beings was considered.

RESULTS

The study conducted with 76 patients enrolled in the peritoneal dialysis in a clinic of nephrology of Sergipe state program revealed that 39 (51.3 %) patients were female, 38 (50 %) were adults, ranging in age between 18 and 59 years, however it was noted that 34 (44.7 %) were elderly with 60 or more years of age. The majority was married 50 (65.8 %). It was identified that 04 (5.3 %) were adolescents, 12 to 17 years if age.

As to their place of residence, 34 (44.7 %) patients resided in Aracaju, capital of the

state of Sergipe, 37 (48.7 %) in the interior of Sergipe, 04 (5.3 %) were residents of the State of Bahia and 01 (1.3 %) lived in the State of Alagoas. With respect to education level, it was shown that 70 (92.2 %) respondents had some degree of schooling, with emphasis on the elementary school 35 (46.1%). Of the total number of patients studied 06 (7.9 %) had no schooling.

When questioned on their work activity it was identified that 75 (98.7 %) had no remunerated activity and 55 (72.4 %) had income of up to 01 minimum wage, from welfare programs or retirement, and 21 (26.3 %) had income above the minimum wage.

In relation to the type of treatment it was found that 39 (51.3 %) underwent the APDC and 37 (48.7 %) underwent APD. As to the time of stay in the PD program it was observed that 22 (28.9 %) were less than a year and 54 (71.1 %) for more than 1 year.

With respect to the self-care practices, according to the patients' reports it was identified that the majority follows the guidelines received, however, there is still a deficiency in the follow-up as for the protocol established by the clinic, especially as for hand-washing, drying the catheter outlet, last towel usage, sunbathing, application of ointment on the catheter outlet, hydric and dietary control, as observed in Table 1.

Table 1. Distribution of patients on peritoneal dialysis in relation to self-care practices. Aracaju - SE, 2010.

Variables	Specifications	n=76	%
Dry the catheter after body hygiene	Yes	73	96,1
	No	3	3,9
Uses ironed towel	Yes	61	80,3
	No	12	15,8
	Sometimes	3	3,9
Sunbathing	Yes	40	52,6
	No		
	Sometimes	22	28,9
Local Ointment	Yes	14	18,4
	No	65	85,5
	Sometimes		
	Yes	7	9,2
	No		
Hand Washing	Sometimes	4	5,3
	Yes	73	96,1
	No	1	1,3
Uses mask	Sometimes	2	2,6
	Yes	73	96,1
	No	1	1,3
Hydric Control	Sometimes	2	2,6
	Yes	55	72,4
	No	16	21,1
Dietary Control	Sometimes	5	6,6
	Yes		
	No	33	43,4
	< 1 Year		
	1 to 3 years	22	29,0
Uses the medications	>3 to 5 years	21	27,6
	>5 to 7 years		
	> 7Years		
	Yes		
	No	73	96,1
	Yes		
	No		
Duration of therapy	Sometimes	3	3,9
	Yes		
	No	22	28,9
	Sometimes		
	Yes	29	38,2
	No	17	22,4
	Sometimes	4	5,3
	Yes		
	No	4	5,3

The researchers’ observation results on the adequate catheter fixation, catheter outlet conditions and patient blood pressure during the time of the interview, are shown in Table

2. It was observed that 33 (43.4 %) patients had signs of infection, in particular, crust, external drainage (serous exudate, bloody or purulent) and hyperemia.

Table 2. Distribution of patients on peritoneal dialysis in regard to the researchers’ comments for adequate catheter fixation, catheter outlet conditions and patient blood pressure. Aracaju - SE, 2010.

Variables	Specifications	n=76	%
Fixed correctly	Yes	35	46
	No	23	30,3
Catheter outlet	Non-fixed	18	23,7
	Good healing	43	56,6
	Signs of Infection	33	43,4
Blood Pressure	< 140 X 90 mmHg	45	59,2
	< 140 X 90 mmHg	31	40,8

DISCUSSION

The study carried out in the Southern region of Brazil⁷, demonstrates that the chronic renal patients generate high social cost related to early retirement, outpatient spending and the use of specific medications. Therefore, the results obtained in this study revealed that the majority of the patients were in the economically active age range;

however, only one patient had remunerated activity, the others lived with income from pensions or government care programs.

With respect to chronic renal patients and the work activity, the data demonstrated that the almost all of them were in the economically active age range did not have paid activities, which may be related to the fact that chronic renal disease, most of the times, prevents the patient from performing a work activity, being by the time spent for the

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completion of the dialysis procedure, by compromising physical or physiological changes resulting from the disease.¹³ The economic patient and family situation is a factor to be considered, because in most cases, the continuity of treatment it will depend on it.¹⁴

In this context, it can be inferred that dialysis treatment brings consequences to lifestyle and adaptation to new income, which most in most cases has not been able to meet the family needs, as a result a drop in productivity that the patient has in the course of renal disease. In addition, 34 (44 %) patients were elderly, 60 years of age or greater, which can contribute to self-care deficiency.

The majority of the patients showed appropriate self-care, despite the low education and income. Variables such as patient and the caregiver education, family income, level of information on the dialysis and hand washing techniques, in addition to environmental conditions can interfere with dialysis.¹⁵

Similarly to the study¹⁶ conducted in São Paulo, the majority of the patients had been in PD for at least 3 years, which enables self-care adequacy, considering the development of skills necessary for the achievement of PD. However, the nurse must be careful to constantly assess the self-care performed by the patient, encouraging them to participate in retraining programs, encouraging constant technical updating, so that there is no decrease in care monitoring, particularly with regard to hygiene.

In relation to the use of antibiotic ointment on the catheter outlet it was observed that the majority used it daily. The prophylactic use of medication in the catheter outlet is a frequently adopted practice in some institutions, including the clinic in this study. A topic of much relevance, infection is one of the most frequent complications of chronic renal failure.¹⁷

Hand washing and the use of mask to manipulate the catheter are essential self-care practices for correct performance of the dialysis technique, due to the possibility of contaminating the catheter and the dialysis solution that will be infused into the abdominal cavity. Study¹⁸ showed that the time and the number of times for hand washing oriented during the training carried out by nurses are of fundamental importance, because when not performed properly, they are failure determinants which may lead to

the onset of peritonitis.

Despite the sun baths be an orientation given by the nurses from the clinic in study to promote healing of the catheter outlet, it was observed that 28.9 % of the patients do not perform it. It can also be inferred that there is the need for nurses to rethink the guidelines provided to patients regarding the importance of this, so that they can see the advantages of its implementation.

It is noteworthy that the infection can lead to peritonitis, which is one of the main causes of treatment failure, with direct consequences in the need for catheter removal and changing the patient over to hemodialysis.¹⁸ The benefits of continuous use of medicinal products, besides the Reno protection control of hypertension and prevention of complications, such as: increased blood pressure, stroke, acute myocardial infarction, among others are data that may assist in the patient's understanding for the treatment adherence need.¹⁹

With relation to diet, there was on bad patient adherence to the treatment, which was already expected, there are already reports that it is difficult for patients regarding the diet, due to the restrictions, especially regarding the use of salt and fluid restriction, especially when the ultra-filtration during dialysis is not appropriate, and there is fluid retention.¹⁵

It was demonstrated that 31 (40 %) patients had hypertension at the time of the interview and this may occur for some motives such as: non-adherence to the diet and drug therapy, inadequate medication dosage or the fact of being interviewed (white coat hypertension).

The Brazilian Arterial Hypertension Guidelines consider hypertension as the systolic blood pressure values greater than or equal to 140 mmHg or diastolic pressure greater than or equal to 90 mmHg. When the systolic or diastolic blood pressure is located in different categories, the higher should be considered to classify the blood pressure. It is essential to orient patients on the importance of frequent blood pressure monitoring in order to avoid complications, functional and/or structural, that can affect organs with a consequent increase in cardiovascular diseases, in particular, cerebral vascular accident (CVA), acute myocardial infarction, heart failure, vision impairment and progression of kidney disease.²⁰

CONCLUSION

This study demonstrated that the majority

of the patients were adults, within the age range considered economically active, however they no longer practice work activity due to their health condition. Regarding the self-care performance it is shown that the majority followed the guidelines received from the nurse, and are considered satisfactory self-care. However, some patients neglected their care regarding the sun bathing the catheter outlet, dietary treatment, hydric control and correct catheter fixation in the abdomen, revealing that there is the need for constant monitoring and reorientation by the nurse in order to promote greater knowledge, awareness and adherence by the patient.

Based on the results found it is necessary involving the patient for the success of peritoneal dialysis. Therefore, this condition requires the individual to abandon the notion of being passive and unaware of the therapeutic process, to become an active being, controlling their own care, in order to maintain their health and well-being.

REFERENCES

1. Sesso RC, Lopes AA, Thomé FS, Lugon JR, Santos DR. Relatório do censo brasileiro de diálise 2010. J Bras Nefrol on line [Internet]. 2011 Oct/Nov/Dec [cited 2012 May 10];33(4):442-7. Available from: <http://www.scielo.br/pdf/jbn/v33n4/09.pdf>.
2. Chronic kidney disease: early identification and management of chronic kidney disease in adults in primary and secondary care. National Institute for Health and Clinical Excellence on line [Internet]. 2008 Sept [cited 2011 Nov 03];1-36. Available from <http://www.nice.org.uk/nicemedia/pdf/CG073NICEGuideline.pdf>.
3. Negoi D, Nolph KD. History of peritoneal dialysis. In: Khanna R, Krediet R, editors. Nolph and Gokal's Textbook of Peritoneal Dialysis. 3rd ed. New York: Springer; 2009:3.
4. Jacobowski JAD, Borella R, Lautert L. Pacientes com insuficiência renal crônica: causas de saída do programa de diálise peritoneal. Rev Gaúcha Enferm on line [Internet]. 2005 Dec [cited 2009 Dec 10];26(3):381-91. Available from: <http://seer.ufrgs.br/RevistaGauchadeEnfermagem/article/view/4568/2495>.
5. Sesso RC, Lopes AA, Thomé FS, Lugon JR, Santos DR. Relatório do censo brasileiro de diálise de 2010. J Bras Nefrol on line [Internet]. 2011 Oct/Nov/Dec [cited 2012 May 06];33(4):442-7. Available from: <http://www.scielo.br/pdf/jbn/v33n4/09.pdf>.
6. Carvalho IMP, Melo RL, Andraus LMS. Produção científica de enfermagem em nefrologia, no Brasil, no período de 1989 até 1999. Rev Eletr Enf on line [Internet]. 2001 Jul/Dec [cited 2009 Dec 22];3(2):[about 5 p.]. Available from: <http://www.revistas.ufg.br/index.php/fen/article/view/724/784>.
7. Zilmer JGV, Schwartz E, Jardim VMR, Muniz RM, Bueno MN, Feijó AM. Caracterização dos clientes em diálise peritoneal ambulatorial contínua-CAPD da região sul do Brasil. Cogitare Enferm on line [Internet]. 2009 Apr/June [cited 2010 May 10];14(2):318-23. Available from: <http://ojs.c3sl.ufpr.br/ojs2/index.php/cogitare/article/view/15624/10395>
8. Rolim LR, Frota NM, Almeida NG, Barbosa IV, Melo EM. Clinical-epidemiological study of patients with acute renal failure. Rev Enferm UFPE on line [Internet]. 2012 Feb [cited 2012 Feb 03];6(2):317-23. Available from: http://www.ufpe.br/revistaenfermagem/index.php/revista/article/view/2161/pdf_804.
9. Orem DE. Fundamentos de Enfermagem. 5ª Ed. Rio de Janeiro. Editora Guanabara Koogan; 2004.
10. Pacheco GS, Santos I. Cuidar de cliente em tratamento conservador para doença renal crônica: apropriação da Teoria de Orem. Rev Enferm UERJ on line [Internet]. 2005 [cited 2009 Jan 12];13(2):257-62 Available from: <http://www.facenf.uerj.br/v13n2/v13n2a18.pdf>.
11. Figueiredo AE, Kroth LV, Lopes M H I. Diálise peritoneal: educação do paciente baseada na teoria do autocuidado. Sci Med on line [Internet]. 2005 July/Sept [cited 2011 Jan 15];15(3):198-202. Available from: <http://revistaseletronicas.pucrs.br/ojs/index.php/scientiamedica/article/viewFile/1567/1170>.
12. Brasil. Ministério da Saúde. Resolução n. 196, de 10 de outubro de 1996: diretrizes e normas regulamentadoras de pesquisa envolvendo seres humanos [Internet]. Brasília (DF): Ministério da Saúde [cited 2012 Feb 10]. 1996. Available from: <http://www.datasus.gov.br/conselho/resol96/RES19696.htm>.
13. Lara EA, Sarquis LMM. O paciente renal crônico e sua relação com o trabalho. Cogitare Enferm on line [Internet]. 2004 July/Dec [cited 2010 Jan 10];9(2):99-106. Available from: <http://ojs.c3sl.ufpr.br/ojs2/index.php/cogitare/article/view/1721/1429>.

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14. Carreira L, Marcon SS. Cotidiano e trabalho: concepções de indivíduos portadores de insuficiência renal crônica e seus familiares. Rev Latino-Am Enfermagem on line [Internet]. 2003 Nov/Dec [cited 2009 Jan 10];11(6):823-31. Available from: <http://www.scielo.br/pdf/rlae/v11n6/v11n6a18.pdf>.

15. Abrahão SS, Ricas J, Andrade DF, Pompeu FC, Chamahum L, Araújo TM et al. Fatores de risco para peritonites e internações. J Bras Nefrol on line [Internet]. 2010. [cited 2010 May 1];32(1):100-6. Available from: <http://www.scielo.br/pdf/jbn/v32n1/v32n1a16.pdf>.

16. Ribeiro RCHM, Oliveira GASA, Ribeiro DF, Bertolin DC, Cesarino CB, Lima LCEQ et al. Caracterização e etiologia da insuficiência renal crônica em unidade de nefrologia do interior do Estado de São Paulo. Acta Paul Enferm on line [Internet]. 2008 [cited 2009 Jan 02];21:207-11. Available from: <http://www.scielo.br/pdf/apv/v21nspe/a13v21ns.pdf>.

17. Ocharan-Corcuera J, Foraster A, Monfá JM, Hernández-García E, Barberán J, Andrés E et al. Procedures against dialysis infection. Dial Traspl on line [Internet]. 2010 [cited 2011 May 9];31(3):89-100. Available from: http://www.sedyt.org/2004/revista/numeros-enteros/31_3/dialysis_infection.pdf.

18. Moreira PRR, Ferreira S, Almas ACG, Peralva LEL. Infecção do orifício de saída; uma complicação importante na diálise peritoneal ambulatorial contínua. J Bras Nefrol on line [Internet]. 1996 Oct/Nov/Dec [cited 2010 Jan 05];18(4):348-55. Available from: http://www.jbn.org.br/detalhe_artigo.asp?id=884.

19. Pacheco GS, Santos I, Bregman R. Clientes com doença renal crônica: avaliação de enfermagem sobre a competência para o autocuidado. Esc Anna Nery R Enferm on line [Internet]. 2007 Mar [cited 2010 Jan 02];11(1):44-51. Available from: <http://www.scielo.br/pdf/ean/v11n1/v11n1a06.pdf>.

20. Sociedade Brasileira de Cardiologia. VI Diretrizes Brasileiras de Hipertensão Arterial. Rev Bras Hipertens on line [Internet]. 2010 Jan/Mar [cited 2012 May 10];17(1):4-64. Available from: <http://departamentos.cardiol.br/dha/vidiretriz/vidiretriz.asp>.

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