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Care provided for hemodialysis patients in selected dialysis centres of the Lublin region

In Poland, the last decade brought about enormous progress in the field of dialysis therapy. This progress was visible not only in the increased number of dialysis patients but also, following the world trends, it concerned the quality of the therapeutic methods used (9, 12).

The therapeutic development with its all aspects caused a real breakthrough in achieving optimum dialysis therapy. At present, the methods assessing the adequacy of renal–replacement treatment using, for example, kinetic modelling of urea became standard procedures for evaluating the quality and efficiency of therapy (3, 4, 11, 12).

As expected, all this resulted in a substantially prolonged survival of dialysis patients, which is also consistent with the world-wide trends (6, 7, 8, 10). Therefore, in the recent years, an improvement of "the quality of life" of dialysis patients has become the main task (3, 4, 6, 7). This quality can be defined as a state of maximum attainable mental and physical well–being in the presence of underlying and associated diseases together with the ways of chronic treatment – according to the WHO definition of health (5).

Nowadays, the factors which have the strongest effects on the improvement of "the quality of life" of dialysis patients are well known. The effectiveness of dialyses may be calculated by means of the well-recognised mathematical models, however precise determination of "the quality of life" level of a patient is actually impossible (2, 3, 4).

Therefore, in the recent years, all kinds of self-evaluation tests, including the SGA (Subject Global Assessment) test have become increasingly popular (6, 7). Although, still far from being perfect, such tests may be a useful tool enabling the therapists to find out quite accurately what the psychophysical state of their patients is. Moreover, in connection with standardization of therapeutic management introduced into treatment of renal

diseases and renal replacement therapy, the tests of satisfaction of patients chronically subjected to dialyses in a given centre are being designed (12, 14).

The present study concentrated on the problems of providing the patients treated in the analysed hemodialysis centres with proper medical care but from the point of view of patients (1, 14), so it concerned individual patients who had answered the questions themselves. The questions contained in the questionnaire were to be rather clinical than statistical or organisational in character, thus were the opposite of the questions of surveys carried out for the needs of overwhelming standardization.

METHODS

It was decided that the study would be accomplished by means of an elaborated questionnaire; the data were collected by interviewers. An interviewer was always one of the authors, which guaranteed reliability and competence in filling in the questionnaires and, on the other hand, provided full anonymity of the patients in relation to their medical staff or of the mentioned staff in relation to the supervisors.

The questionnaire consisted of two parts: one with the questions for patients and another one with those concerning patients but addressed to middle and highly qualified medical staff. The first part contained only the closed questions, often multiple–choice or multi-step ones, sometimes their combination (3).

RESULTS

The questions addressed to the patients were compiled in such a way as to show the outlines of issues of care for patients in individual dialysis centres. The authors were mostly concerned with routine medical visits which theoretically should be performed during every dialysis appointment. Furthermore, some peri–dialysis activities and pa-

Table 1. Compilation of dialysis centers and the number of patients

Hemodialysis centre	No of patients
Kraśnik	47
Janów Lubelski	43
Puławy	55
Sandomierz	46
Tomaszów Lubelski	21
Zamość (Voivodeship Hospital)	33
Zamość (The Hospital named after John Paul II)	43
TOTAL	288

tients' knowledge about dialysis therapy in general, their own treatment and laboratory results were of interest to us. A part of results was presented graphically to achieve legibility and imagery. The remaining results were presented in tables, and also in this case legibility of their presentation was our main purpose.

The results are discussed in the sequence corresponding to the importance of issues related to the quality of dialysis therapy in the centre – according to earlier assumptions.

The question whether the medical visit is performed at every dialysis was positively answered by 96.18% of the patients. Table 3 illustrates the usual length of such a visit and Table 2 shows what the visit looks like according to the patients. Table 3 additionally describes the activities performed during the medical visit. It also shows the frequency of arterial pressure measurements during hemodialysis. Tables 4 and 5 depict the results concerning taking a history during routine medical visit. Table 6 shows who is called by the patients when some problems develop during dialysis. Table 8 answers the question when the patient is weighed while Table 7 checks whether the patient knows what the basic terms concerning his body weight mean. In addition, Table 8 informs who and how

Table 2. What does a physician do during his visit on hemodialysis?

Only talks	Only examines	Talks and examines
9.72 %	2.09 %	86.46 %

Table 3. How long is the medical visist during hemodialysis, what examinations are done and how many times blood pressure is taken?

Duration			
1 min.	3 min.	5 min.	more then 5 min.
6.25 %	72.29 %	15.97 %	1.04 %
Activities (examinations)			
pressure	heart	abdominal count	swellings
68.75 %	92.36 %	20.83 %	42.71 %
Pressure measurement			
1 x	2 x	3 x	more
3.96 %	51.48 %	18.81 %	21.78 %

Table 4. Questions about hydration and other problems asked during the medical visit

fluids drunk	swellings	arterial pressure	cough
95.39 %	92.55 %	64.18 %	52.84 %
bone pains	joint oedema	stomach-ache	constipation or diarrhoea
92.22 %	75. 92 %	53.33 %	49.26 %

Table 5. Questions concerning effort efficiency and diet which are most frequently asked during the medical visit

Pain in the precordial region	Arrythmia	Effort efficiency
94.96 %	83.45 %	59.35 %
diet	salt	fruits and vegetables
94.95 %	86.28 %	53.06 %

Table 6. Who does the patient send for when problems develop?

Physician	Nurse	The patient decides himself
4.86 %	94.09 %	1.04 %

Table 7. Does the patient know what the following terms mean?

Suitable weight	Dry weight
9.72 %	53.12 %

Table 8. When the patient is weighed, how is ultrafiltration decided about and who determines its amount and the dose of heparin?

Weighing		
before hemodialysis	after hemodialysis	during hemodialysis
99.3 %	98.96 %	0.69 %
Decision about ultrafiltration		
according to the weight gain	continuously the same	at discretion
96.18 %	3.82 %	0 %
Who determines the amount of ultrafiltration		
the patient himself	nurse	physician
0.99 %	89.1 %	5.94 %
Who determines the dose of heparin		
physician	nurse	the patient himself
85.42 %	14.58 %	0 %

Table 9. Does the patient know what dose of heparin is administered during dialysis?
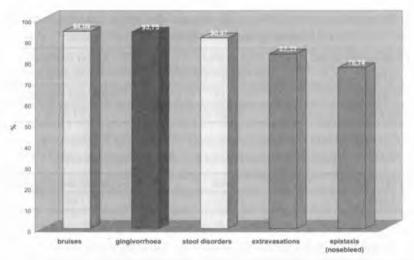
YES	NO
51.04 %	48.96 %

Fig. 1. Are the questions concerning the following asked to determine
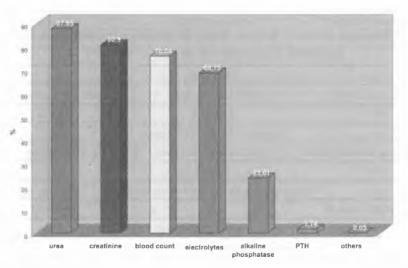the dose of heparin?

Fig. 2. Does the patient know the results of his biochemical test?

decides about ultrafiltration. Table 9 answers the question whether the patient knows how much heparin is administered during hemodialysis while the previous table defines who determines the doses. Figure 1 shows which questions are most frequently asked on taking a history to determine the heparin doses, Figure 2, in turn, illustrates which biochemical results are known to patients and what proportions can be observed there.

DISCUSSION

The results we presented prompt to analyse the phenomena observed during the study in relation to the accepted assumptions. In general, the results are not extremely surprising, their analysis, however, must be multidirectional due to the number and character of the examined issues.

Starting with the answers presented in the first figures, the frequency of medical visits, their length and way they are carried out on hemodialysis are found to be satisfactory (1, 14). The same concerns the activities the visit involves. The differences in positive answers to particular questions should be explained by diversity of the patients and the differences in management provided by doctors depending on the patient's condition may be treated as positive phenomena. Similarly, the measurements of blood pressure and temperature carried out by the staff of dialysis centres during hemodialysis should be assessed as satisfactory. It is noteworthy that each patient has his pressure taken at least one time, in most cases – twice. The answers concerning the questions asked by doctors during the visit arise 'mixed feelings'. On the one hand, it is good that all questions contained in the questionnaire which dealt with this issue were answered positively and in high percentage – never below 50%. On the other hand, it is strange that no result approximated 100%, even in the questions about the issues most relevant for hemodialysis patients – the amount of fluids drunk, swellings, precordial and bone pains or diet. Thus the following question should be asked: if such questions are not asked what exactly does the doctor talk about to his patients. Of course from the psychological point of view the conversation itself is very important for the patient, yet the doctor should elicit many relevant clinical data (2, 7). All this may be only explained by the fact that visits are made at least three times a week and the patients are well known to their doctors.

The issue of calling the staff of the dialysis centre by patients with some complaints seems to be more satisfactory. The patient never decides himself about the treatment and always sends for the staff, 5% of them call physicians, which may prove high care and attention for the patients provided by the centres.

The next group of questions analyses the problems of dehydration during successive dialyses. Each time the patient is weighed before and after dialysis and in the majority of cases ultrafiltration is decided about on the basis of the weight gain, which is most obvious and proper management (3, 4). In over 94% of cases dehydration is decided about by a nurse, the physicians are probably left with the most complicated cases, which again should be regarded as the most suitable approach. Although the patients know quite well the terms defining their hydration, they report that only in about 1% of cases dehydration is their decision.

The results determining the use of heparin are also optimistic. Even though the majority of patients do not know the doses and almost 15% believe that these doses are determined by the nurse, the answers to the questions asked before final determination

of doses are highly satisfactory (4). This shows careful and proper attitudes of the examined staff (13).

Finally, the patients' knowledge about their biochemical tests should be evaluated. The most fundamental tests i.e. the levels of urea, creatinine, electrolytes or blood count are commonly known, considering specificity of dialysis patients (10). Other values are not so well known, which is likely to be connected with rarer examinations of these parameters.

Furthermore, it should be stressed that explicit evaluation of the issues described above which concern the patients subjected to chronic hemodialyses is difficult. This is caused by the lack of Polish and foreign standards of management in such cases. The questionnaire evaluating satisfaction of chronic hemodialysis patients presented recently by Mazowiecka Regionalna Kasa Chorych (Mazovian Regional Health Service) is focused on slightly different problems, chiefly extra–clinical ones (12). It seems that our paper may be a good source of finding the standards concerning the discussed issues, particularly that the authors do hope to continue their studies in a substantially bigger population of patients.

CONCLUSIONS

The authors are fully aware that on the basis of even the best questionnaire, the far-reaching conclusions about the quality of medical care provided in dialysis centres cannot be drawn. Their subjective feelings about this issue and the clinical state may not fit the conclusions concerning the evaluated dialysis centre based only on this questionnaire, especially that the questions dealt only with selected aspects of medical care.

Therefore, the conclusions will be rather partial than general in character – as it was presented in the discussion. Despite this, we believe that the analysis used in our studies may well illustrate our assumptions and give a real picture of the way the patients subjected to hemodialyses are cared for in our region.

To obtain more general evaluation and conclusions, the studies should include the remaining dialysis centres of the region; it also seems worthy to repeat them in the future.

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2002.05.02

SUMMARY

The aim of the study was to answer the questions about the quality of dialysis for the patients treated in the selected dialysis centres of the Lublin region in relation to a quantitative and qualitative breakthrough observed in the field of Polish dialysis therapy in

recent years. The study including 288 patients in 7 medium-sized centres used the questionnaire filled in by interviewers. The present paper analyses the patients' answers to the questions about medical care provided in a particular centre.

It is difficult to interpret the results explicitly since there are no available standards of such management. We believe that this study could be used to define them. Nevertheless, the authors think that medical care for the patients treated in dialysis centres of our region is good, although only the patients' answers were analysed.

To evaluate possible changes in the processes mentioned above, it should be worthy to broaden the studies including the remaining centres of our region and to continue them in the future.

Jak opiekujemy się pacjentami hemodializowanymi w wybranych ośrodkach regionu lubelskiego

Celem pracy była próba odpowiedzi na pytania o jakość dializowania pacjentów leczonych w wybranych stacjach dializ regionu lubelskiego w świetle dokonanego w ostatnich latach przełomu ilościowego i jakościowego w zakresie dializoterapii w Polsce. Badanie objęło grupę 288 chorych w siedmiu ośrodkach średniej wielkości, a zrealizowane zostało przy użyciu kwestionariusza wypełnianego z pomocą ankietera. Praca zawiera opracowane odpowiedzi pacjentów na pytania związane z szeroko pojętą opieką nad chorym, jaka ma miejsce w danym ośrodku. Uzyskane wyniki badań są trudne do jednoznacznej interpretacji z uwagi na brak opracowań standaryzujących tego rodzaju postępowanie. To raczej niniejsze opracowanie mogłoby posłużyć do takich celów. Autorzy są jednak zdania, że sytuacja w zakresie opieki medycznej zapewnianej pacjentom na stacjach dializ naszego regionu wygląda dobrze. Jest to tym cenniejsze, że analizowano przecież odpowiedzi samych chorych. Po to aby móc oceniać ewentualne zmiany zachodzące w tych procesach, wydaje się celowe rozszerzenie przeprowadzonego badania na pozostałe ośrodki regionu, jak również ich kontynuacja.