Renal replacement therapy in an era of socioeconomic changes—report from the Polish registry

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Abstract During the era of so-called ‘real’ socialism, renal replacement therapy was in a very poor condition in Poland. Here we present data on the influence that disease was slightly better in the former German Democratic Republic [2], Hungary, and Czechoslovakia [1], and much worse in countries such as Romania, Albania [3], and the republics of the Soviet Union [1,4]. In Poland, despite many efforts of the nephrological society and the National Committee for Promotion of Nephrology, established in 1984, progress of dialysis facilities was very poor [5]. In 1989 only 81 dialysis units were in existence, with 560 dialysis stations and 1807 patients (46 per million inhabitants compared with 162.8 in countries reporting to the EDTA Registry [1]). This form of therapy took a turn for the better after the beginning of socioeconomic changes in the early 90s. The aim of this study is to document the present and future status of dialysis therapy in Poland.

Subjects and methods

All data are based on the annual questionnaires sent to dialysis and renal transplantation units in Poland, by the National Committee for Promotion of Nephrology, approved by the Ministry of Health and the Parliamentary Health Commission, and supported by the central funding system. Further consequent development of all alternative renal replacement therapy methods (among them especially renal transplantation) is necessary to achieve an acceptance rate comparable with developed countries by the beginning of the next century.

Key words: renal failure; haemodialysis; peritoneal dialysis; development.

Introduction

It is widely known that during the era of so-called ‘real’ socialism before 1989 renal replacement therapy was underdeveloped in all countries of the then Eastern Bloc [1]. The situation of patients with end-stage renal disease was slightly better in the former German Democratic Republic [2], Hungary, and Czechoslovakia [1], and much worse in countries such as Romania, Albania [3], and the republics of the Soviet Union [1,4]. In Poland, despite many efforts of the nephrological society and the National Committee for Promotion of Nephrology, established in 1984, progress of dialysis facilities was very poor [5]. In 1989 only 81 dialysis units were in existence, with 560 dialysis stations and 1807 patients (46 per million inhabitants compared with 162.8 in countries reporting to the EDTA Registry [1]). This form of therapy took a turn for the better after the beginning of socioeconomic changes in the early 90s. The aim of this study is to document the present and future status of dialysis therapy in Poland.
A dramatic increase in the number of patients with diabetic nephropathy (1992, 4.1%; 1993, 6.1%; 1994, 7.9%; 1995, 9.1% of all dialysis therapy patients). Patients were treated with erythropoietin for the first time in 1989; since then the number of patients receiving this drug has increased continuously and has currently reached nearly 60% of the dialysed population.

The gross mortality rate during the period of observation varied between 9.8 and 10.5%. Preliminary data from last year show that at the end of 1996 in Poland 5500 patients were treated with dialysis (HD, 5000; PD, 500). The situation concerning renal transplantation in Poland is much worse. During the past 5 years number of renal transplants has been stable and very low (300–340 per year). Consequently the gap between these two methods of renal replacement therapy widens progressively (Figure 2).

The data presented above indicate that after economic changes have occurred in Poland, the availability of dialysis therapy has increased significantly. This fact is not only the result of the introduction of new, modern dialysis units and new stations in existing ones; better utilization of the dialysis facilities and their equipment with more reliable and more efficient modern machines caused a 136% increase in the number of dialysed patients during the period of observation. Individualization of treatment (choice of various dialysers and concentrates), more common use of bicarbonate dialysis (26% in 1994, 45% in 1995), and introduction of such methods as controlled ultrafiltration, sodium profiling, and haemodiafiltration...
result in a better quality of life [5]. The use of erythropoietin treatment in a major segment of the dialysed population is important in this context. The start of a peritoneal dialysis programme during the past 4 years provided an alternative mode of dialysis treatment for very specific groups of patients. At present 125 children are treated by PD. Altogether 275 children are treated with either mode of dialysis (150 in 11 paediatric HD units). Among adults PD is used mainly in diabetic patients and those with cardiovascular instability, especially elderly people. The mean age of dialysed patients is much lower in Poland than in Western Europe. Also the percentage of diabetic patients is not comparable with developed countries [7,8]. The main reason is persisting shortage of dialysis facilities. For many years mainly patients with primary nephropathies and below the age of 60–65 years were admitted for dialysis. Simultaneously with the development of both dialysis methods, HD and PD admission criteria are changing and more patients with secondary nephropathies (e.g. diabetics) and elderly patients are accepted for renal replacement therapy [5]. We emphasize that the gross mortality rate is quite low, comparable with the European community and Japan, and much lower than in the USA [5,7,9,10].

Hepatitis B is still a serious problem in Polish dialysis units; 21% of chronically dialysed patients are HBS positive. On the other hand a significant decreased in the incidence of HBS was observed during the past 3 years despite the increasing number of new patients on dialysis [5]. Obviously this reflects the success of a vaccination programme which was started on a large scale 3–4 years ago. Nowadays, prior to dialysis, all patients have to be vaccinated using second-generation vaccine [12].

Testing for hepatitis C is done regularly in almost all dialysis units. Unfortunately the number of HCV-positive patients is still very high and exceeds 50%. Hopefully wider use of erythropoietin and isolation of infected patients will lead to a decrease in the incidence of HCV infection in Polish units.

In summary, during the past 6 years definite progress concerning dialysis facilities and treatment possibilities has occurred in Poland. We emphasize that progress has not only quantitative, but also qualitative dimensions. All these changes result from the consequent implementation of consecutive steps of the ‘Programme of the Development and Improvement of Dialysis Therapy in Poland’ [5,13,14]. This programme was prepared by the National Committee for Promotion of Nephrology and then accepted by the Ministry of Health and the Parliamentary Health Commission. Table 1 shows the third step of the programme for the period 1996–2000. Each year a certain amount of money is reserved in the budget of the Ministry of Health to cover expenses of the programme. Special central tenders are organized and a major part of dialysis equipment is purchased in this way under the supervision of the National Committee for the Promotion of Nephrology. For example, in 1996, 18 complete water-treatment systems, 200 modern dialysis machines, 520 CAPD sets, 25 APD sets, 240 thousand dialysers, 4500 subclavian catheters and 2 million fistula needles were bought in such a way. Water-treatment systems and dialysis machines are distributed mainly to new dialysis facilities, the remainder is destined for replacement of old and used machines. Disposables are divided according to the number of patients and distributed to all dialysis units without additional costs. Erythropoietin is purchased and distributed in a similar way (in 1996, 240 million IU). This system enables us to save large amounts of money, to avoid monopolization of the medical market, and to cut down prices. A certain amount of money is provided for the reimbursement of other current expenses (concentrates, heparin, other drugs and solutions etc.). It comes from the central (ministerial) budget (academic dialysis units) or from the local (regional or municipal) budgets (regional dialysis units). From the beginning of 1997 onwards a central fund will be established to cover reimbursement of some highly specialized procedures. Dialysis is one of them. The system described above appears to be effective and successful. The further development of dialysis during the next few years (Table 1) will be based on similar economic principles. We hope that consequent implementation of the programme will allow us by the beginning of the 21st Century to achieve an acceptance rate for dialysis patients comparable to that of developed countries. Additionally a new transplantation law has been approved by the Polish parliament. Hopefully this fact will have a positive influence and will result in real progress of this alternative method of renal replacement therapy. We consider it the most natural and economical mode of treatment. It has the added benefit of relieving the burden on dialysis units, specifically if one takes into consideration that current survival rates (both patients and grafts) in Poland are similar to those in the developed world [15].

Conclusions

After the dramatic socioeconomic changes following the implosion of the Soviet bloc, significant progress in the dialysis possibilities and treatment facilities has occurred in Poland. This programme resulted from an enormous effort of the nephrological community, from

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p.m.p., Per million population.
better appreciation of the problem by the authorities on different levels and, last but not least, from economic improvement in the country. A system based on a central fund and on central purchase of dialysis equipment proved to be very efficient and is recommended to countries in which the dialysis system is still underdeveloped. The further consequent development of all alternative methods of renal replacement is necessary to achieve acceptance rates comparable to those in developed countries.

Acknowledgements. All authors of the present study are regional consultants in nephrology and members of the National Committee for the Promotion of Nephrology. B. Rutkowski is a President of the Committee, J. Puka is responsible for the Registry. We would like to record our appreciation to all people and institutions involved in the dynamic development of renal replacement therapy in Poland during recent years.

References