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Special Article

Renal replacement therapy in Korea, 2012 ☆

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Abstract

The Korean Society of Nephrology (KSN) launched the official end-stage renal disease (ESRD) patient registry in 1985, and an Internet online registry program was opened in 2001 and revised in 2013. The ESRD Registry Committee of KSN has collected data on dialysis therapy in Korea through the online registry program in the KSN Internet website. The status of renal replacement therapy in Korea at the end of 2012 is described in the following. The total number of ESRD patients was 70,211 at the end of 2012, which included 48,531 hemodialysis (HD) patients, 7,552 peritoneal dialysis (PD) patients, and 14,128 functioning kidney transplant (KT) patients. The prevalence of ESRD was 1,353.3 patients per million population (PMP), and the distribution of renal replacement therapy among ESRD patients was as follows: HD, 69.1%; PD, 10.8%; and KT, 20.2%. The number of new ESRD patients in 2012 was 11,742 (HD, 8,811; PD, 923; and KT, 1,738; the incidence rate was 221.1 PMP). The primary causes of ESRD were diabetic nephropathy (50.6%), hypertensive nephrosclerosis (18.5%), and chronic glomerulonephritis (18.1%). The mean urea reduction ratio was 67.9% in male and 74.1% in female HD patients. The mean Kt/V was 1.382 in male and 1.652 in female HD patients. The 5-year survival rates of male and female dialysis patients were 70.6% and 73.5%, respectively.

Introduction

The Korean Society of Nephrology (KSN) has the largest continuous end-stage renal disease (ESRD) patient registry, established in 1985, in which all KSN members are participating voluntarily: the "Insan Prof. Min Memorial ESRD Patient Registry."

The objectives and importance of the patient registry and statistical evaluation of ESRD can be summarized as follows: (1) to estimate the numbers and distributions of target therapy patients by a dialysis specialist group (KSN); (2) to know the characteristics of ESRD and dialysis therapy, and its complications or results based on scientific evidence; and (3) to improve the quality of dialysis therapy, and provide information on socioeconomic health administration and the future health plan.

In 2013, because vascular access and dialysis quality became more important, KSN ESRD Committee has revised the online registry program. Newly included items were vascular access, dialysate components, calcium and phosphorous control, and rehabilitation status [1].

☆Most data in this article were presented at the 33rd autumn meeting of Korean Society of Nephrology, October 2013. Data from the Insan Memorial Dialysis Patient Registry by ESRD Registry Committee of Korean Society of Nephrology: Dong Chan Jin, Nam Ho Kim (Chonnam National University, Gwangju, Korea), Seoung Woo Lee (Inha University, Inchon, Korea), Jong Soo Lee (Ulsan University, Ulsan, Korea), Sung Ro Yoon (Kunyang University, Daejeon, Korea), and Byung Su Kim (The Catholic University of Korea, Seoul, Korea).

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Data collection method

The ESRD Registry Committee of KSN has collected data on dialysis centers and patients through an online registry program on the KSN Internet website (http://www.ksn.or.kr) launched in 2001 and revised the program in 2013. The program also has a graphic evaluation function of dialysis adequacy [Kt/V and normalized protein catabolic rate (nPCR)] and a peritoneal equilibrium test. For ensuring the security of patients' personal information, the program

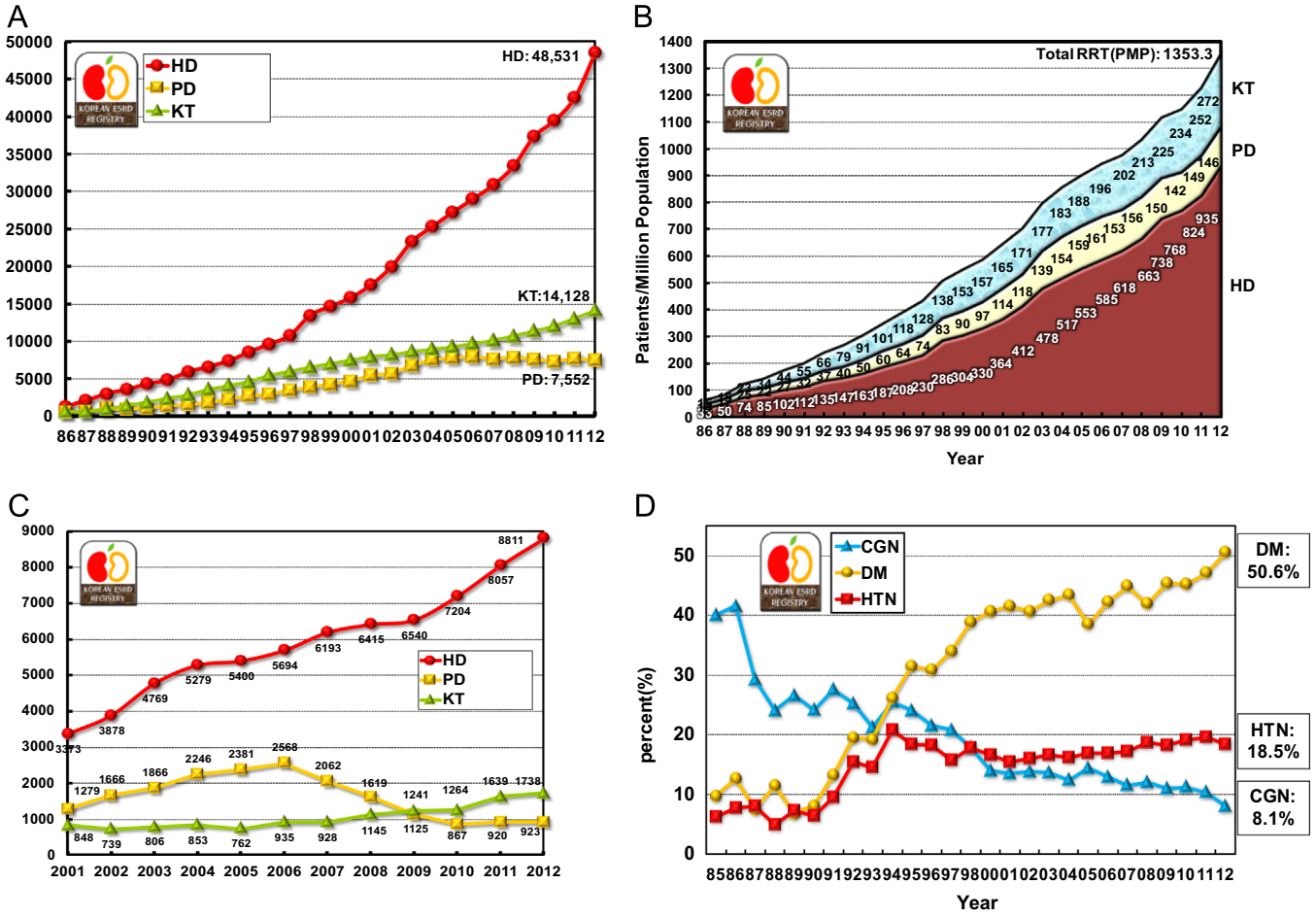

Figure 1. Prevalence and incidence of end-stage renal replacement therapy in Korea. The number of patients with renal replacement therapy at the end of each year (A); point prevalence of renal replacement therapy (B); patients starting renal replacement therapy each year (C); and three major causes of end-stage renal disease (D). CGN, chronic glomerulonephritis; DM, diabetic nephropathy; HD, hemodialysis; HTN, hypertensive nephrosclerosis; KT, kidney transplantation; PD, peritoneal dialysis; PMP, patient numbers per million population; RRT, renal replacement therapy.

Table 1. Causes of end-stage renal diseases in new patients

Causes	%												
	1992	1994	1996	1998	2000	2002	2004	2006	2008	2009	2010	2011	2012
Chronic glomerulonephritis	25.3	25.5	21.6	17.9	14.0	13.9	12.5	13.0	12.1	11.1	11.3	10.4	8.1
Not histologically confirmed	19.7	20.4	16.7	13.6	10.6	10.0	8.6	9.0	8.2	7.5	7.7	6.9	4.5
Histologically confirmed	5.6	5.0	4.9	4.3	3.4	3.9	3.9	3.9	3.8	3.6	3.6	3.5	3.6
Diabetic nephropathy	19.5	26.1	30.8	38.9	40.7	40.7	43.4	42.3	41.9	45.4	45.2	47.1	50.6
Hypertensive nephrosclerosis	15.4	20.8	18.3	17.8	16.6	16.0	16.2	16.9	18.7	18.3	19.2	19.6	18.5
Cystic kidney disease	2.1	2.2	1.8	1.7	2.2	1.6	1.4	1.7	1.7	1.8	1.7	1.6	1.8
Renal tuberculosis	1.1	1.5	1.2	0.5	0.4	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.0
Pyelo/interstitial nephritis	1.3	1.1	0.7	1.0	0.8	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.5
Drugs or nephrotoxic agents	1.3	0.1	0.6	0.3	0.3	0.4	0.2	0.3	0.3	0.3	0.3	0.5	0.4
Lupus nephritis	0.8	0.7	1.0	0.5	0.9	0.8	0.6	0.6	0.6	0.6	0.5	0.5	0.6
Gouty nephropathy	0.7	0.7	0.6	0.5	0.7	0.4	0.5	0.3	0.3	0.3	0.4	0.2	0.3
Hereditary nephropathy	0.3	0.7	0.4	0.2	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.5
Kidney tumor	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3
Other	4.1	2.7	2.8	3.9	3.0	5.6	5.9	6.0	5.8	5.2	5.1	5.0	6.8
Uncertain	28.6	17.8	15.9	16.6	20.2	19.0	17.8	17.5	17.6	16.0	15.3	14.3	11.4