

A Short Review of Experts Research Views on Nephrology in Japan

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Abstract

Nephrology is conditions that affect the kidneys and systemic problems appear as a result of kidney problems (such as renal osteodystrophy and hypertension) are also studied in nephrology. An expert who deals with nephrology diagnosis and management are considered as a nephrologist. According to 2010 Global Burden of disease study, nephrological disorders was ranked 27th in the list of a total number of deaths worldwide in 1990 and it comes up to 18th in 2010. As per data dialysis patient population has been growing every year in Japan more than 310,000 patients are treated with maintenance dialysis by the end of 2012 still every year there is an increase of new patients up to 30,000 more has been observed. Study of Nephrology in Japan can be benefited by open access journals as open access impact factor journals is online availability of research articles which gives breakthrough into better life by getting more readers, more potential collaborators, more citations for the research data been published and supported by Japan nephrology.

Keywords: *Nephrology; Kidney; Osteodystrophy; Hypertension; Chronic Kidney Disease (CKD)*

Introduction

Nephrology is the study about the kidneys and its functions. Kidneys are affected due to metabolic disorders. Renal failure, Glomerular disorders, Urine abnormalities, renal vascular diseases, Kidney and bladder stones, Kidney infections, infections and cancer etc are some of the diseases that may affect the function of the kidneys. 'Nephrology' offers therapeutic solutions like dialysis, kidney transplantation and surgery to cure various kidney related diseases.

It is very important to educate and to obtain awareness on kidney infections and treatment. Researchers, patients and people can gain awareness through literature. Nephrology open access journals provide readers in gaining the required information. Nephrology impact factor journals provide more visibility and accessibility to readers and researchers.

A Society represents a vast international network and provides a well-organized platform for scientific exchange, debate and dissemination between healthcare professionals worldwide whose main motive is to promote patients care. International Society of Nephrology which cares about worldwide advancement of education, science and patient care in nephrology. Some of the societies are Japanese Society of Nephrology Journals [1] which is geared for research and patient care. The Asian Pacific Society of Nephrology [2] which aims to promote and encourage the advancement of scientific knowledge and

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research in all aspects of nephrology. The International Society of Nephrology [3] focuses on worldwide advancement of education, science and patient care in nephrology.

To improve chronic kidney disease (CKD) outcomes, board-certified nephrologists of the Japanese Society of Nephrology (certified nephrologists) are anticipated to play an important role in community medicine and establish an effective cooperative relationship with primary care physicians [4-16]. The present status of certified nephrologists in each prefecture of Japan based on national data. As a result, in 2008, the maximum number of certified nephrologists per population among the 47 prefectures was 5.3 times higher than the minimum number. The rate of increase was not high in prefectures with a small number of certified nephrologists per population, which indicates that the disparities among the prefectures will persist in the future [17-23]. To analyse how certified nephrologists participate in the community medicine of the 47 prefectures of Japan, we performed an ecological regression study. At first, it was shown that the number of certified nephrologists per resident population according to prefectures in 2007 had no significant correlation with the annual amount paid for angiotensin converting enzyme inhibitor (ACEI), angiotensin II receptor blocker (ARB), calcium channel-blocker (CCB), or erythropoiesis stimulating agent (ESA) per resident [24-31]. Furthermore, to determine what parameters had a significant correlation with the incidence of dialysis in each prefecture, simple linear regression analysis was first performed. As a result, parameters with a significant correlation were the average age of the inhabitants, and the annual amounts paid for ARB, ARB plus ACEI, CCB, and ESA per resident. Furthermore, multiple regression analysis revealed that there were two variables included in the final model which could explain the low incidence of dialysis in each prefecture [32]. One was the annual amount of ESA used for predialysis CKD patients, and the other was the number of certified nephrologists per population. Based on these findings, although our ecological study cannot identify causation, it is predicted that certified nephrologists can effectively prevent the progression of CKD, and an increase in certified nephrologists will decrease the incidence of dialysis.

Eminent Open Access journal editors from Japan make up our team to strong potential research group out of them some are executive editor Jun Soma director of division of Nephrology from Iwate Prefectural Central Hospital is associated with current research from 3 yrs. from 2011 he has been associated with OMICS Journal research interest complies Clinical Nephrology, Clinicopathology of renal diseases, experimental nephrology. Yasuhiro Hamada who is an associate professor and deputy director of division of Nephrology & Kidney Center School of Medicine, Kobe University [33-46]. His basic research interests are CKD/MBD renal anaemia diabetic complications especially nephropathy and bone disorder and nutrition therapy. His clinical research interests are CKD diabetes nutrition therapy and nutrition support team NST. Ayumu Nakashima from department of Nephrology Hiroshima University hospital has received his PhD in Hiroshima University [47-59]. He has authored many research articles concerning CKD/MBD Circadian Rhythm and Regenerative Medicine. He is a member of Science Counsellor of the Japanese Society of Nephrology [60-68]. Shigeyoshi Oba is an assistant professor of Division of Nephrology and Endocrinology from The University of Tokyo School of medicine. Some of the authors are Tsuyoshi Yamaguchi from Department of Urology, Kyorin University is currently working on Renal Function and Tumor Size, Yasuhiko Tomino University Faculty of Medicine working with Renal Function in Chronic Kidney Disease Patients and so on [69-82].

Most Prevalent Kidney Disorders: Global Facts

10% of the population worldwide is affected by chronic kidney disease (CKD), and millions die each year because they do not have access to affordable treatment [83-96]. According the 2010 Global Burden of Disease study, chronic kidney disease

was ranked 27th in the list of causes of total number of deaths worldwide in 1990, but rose to 18th in 2010 [97-109]. This degree of movement up the list was second only to that for HIV and AIDs. Chronic kidney disease is a worldwide health crisis. For example, in the year 2005, there were approximately 58 million deaths worldwide, with 35 million attributed to chronic disease, according to the World Health Organization. Chronic kidney disease can be treated with early diagnosis and treatment, it's possible to slow or stop the progression of kidney disease [110-123].

Drugs and Intervention Strategies for the Treatment of Chronic Kidney Disease

Chronic kidney disease (CKD) is a worldwide health problem. The disease is most often progressive of nature with a high impact on patients and society. It is increasingly recognized that CKD can be detected in the early stages and should be managed as early as possible [124-136]. Chronic kidney disease journal provides information on latest techniques and treatments. Treatment of the cause, but in particular control of the main risk markers, such as high blood pressure, glucose and albuminuria, has been instrumental in delaying the progression to end-stage renal disease (ESRD) [137-149]. However, despite the state of the art therapy, the absolute risk of renal and cardiovascular morbidity and mortality in CKD patients remains devastatingly high. Novel drugs are therefore highly desirable to halt effectively the progressive renal (and cardiovascular) function loss [150-159]. Recently, several novel strategies have been tested targeting traditional risk factors such as blood pressure (combination therapy of angiotensin converting enzyme inhibitors (ACEi) and angiotensin receptor blockers (ARB) and novel mineralocorticoid receptor antagonists) as well as dyslipidaemia (statins) with surprising results. In addition, drug targets specifically related to the kidney, such as vitamin D, uric acid, erythropoietin and phosphate, have been the subject of clinical trials, in some instances with unexpected results [160-173]. Finally, novel targets including endothelin receptors and inflammatory pathways are increasingly explored as potential avenues to improve renal and cardiovascular protection, albeit that the drugs tested have not been unequivocally successful [174-186]. In this article we review novel drugs or intervention strategies for the management of CKD, we try to provide explanations for the failure of some promising drugs and hypothesize on the potential success of new strategies [187-198].

Conclusion

Researchers in Japan say they have overcome an obstacle that has prevented the use of transplanted kidneys grown from human stem cells. Takashi Yokoo and his team of colleagues at the Jikei University School of Medicine in Tokyo reached the accomplishment. With the number of patients with end-stage kidney failure increasing globally due to a limited supply of donor organs, Yokoo and his team found out a way to grow a kidney to full size, as well as a way for the new kidneys to pass urine [199-203]. Of late, researchers have succeeded in growing functional kidneys from human stem cells. However, because there was no pathway for excreting urine, the kidneys were not able to grow to full size. More than 300,000 people in Japan alone rely on dialysis because their kidneys do not function properly. Researchers said the latest breakthrough may one day mean that kidney tissue generated from a patient's own body could markedly improve how a damaged organ works [204-208]. Work involves iPS cells is seen as a way scientists can generate materials either to experiment on, or to use within the body-perhaps as a means of repairing or even replacing damaged or diseased organs.

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