

DOI: 10.4103/0971-5916.213766



**Chronic kidney diseases – Recent advances in clinical and basic research**, Kosaku Nitta, editor (Karger, Basel, Switzerland) 2015. 174 pages. Price: US\$ 209.00/CHF 178.00/EUR 166.00

ISBN 978-3-318-05464-4

Chronic Kidney Disease (CKD) is a deceptive and catch all term – almost anything in the field of nephrology can be covered under this phrase. Any book that claims to cover recent advances in clinical and basic research in CKD sets quite a wide mandate for itself. An interesting feature of this book is that all the contributors are from Japan, a country that has set very high standards in management of patients with kidney disease. Japan has one of the highest incidence and prevalence rates of advanced CKD, but the Japanese

nephrologists manage their patients exceptionally well. The Japanese transplant patients and those on dialysis exhibit some of the best long term outcomes – with low mortality and morbidity rates. In the absence of an active deceased donor transplant programme, they have developed perhaps the most successful across ABO kidney transplant programme. Therefore, when a compilation of writings from Japan makes an appearance, it behooves us to pay attention.

This book contains a compilation of selected presentations delivered during the 2015 Annual conference of the Japanese Society for Dialysis Therapy – the biggest nephrology conference in the world. This conference typically has hundreds of presentations, so how the 17 featured here were selected is not clear. Presented here as separate chapters, these are a mix of review articles and stand-alone free paper presentations. The book or chapters do not conform to any specific theme in kidney disease. However, as expected in a dialysis conference, these are mostly around the problems of dialysis patients. There are a few chapters on peritoneal dialysis whereas the remainder address haemodialysis-related issues.

The first couple of chapters are centered around dialysers - starting from the history to the modern evolution of the filter. Haemodiafiltration (HDF) is an emerging modality of dialysis and holds promise in improving outcomes so the discussion is particularly relevant. A high quality dialysate water is needed for such type of modern convective dialysis procedures. The second-last chapter in the book discusses in detail the purification and constitution of dialysis fluid. The standard of purity of water for dialysis in Japan is higher than elsewhere in the world and perhaps contributes to the good outcomes.

In contrast to many countries with good dialysis outcomes, home haemodialysis is not popular in Japan. Chapter 5 discusses the advantages of this method, and also reasons why this therapy has not been very popular in Japan with just about 400 patients in the entire country.

The latest survey on peritoneal dialysis in Japan has shown a fall in the total number of cases but those who are on this therapy perhaps receive a high standard of care – as shown by a high proportion of those receiving icodextrin. The poor uptake of peritoneal dialysis, unless promoted by the government, is a global phenomenon, and some of the Japan-specific reasons have been discussed.

Management of complications common in patients with advanced CKD and those on dialysis - such as anaemia and mineral-bone disorders have received due attention. Several aspects of these problems have been discussed – both in clinical area and those related to understanding of basic biological abnormalities.

The fibroblast growth factor (FGF) - Klotho axis becomes abnormal early in the disease, and has emerged as a key determinant in the genesis of mineral-bone disorders. Chapter 7 is a review which discusses its centrality in this important clinical problem and how it could influence clinical practice.

Chapter 8 on regenerative medicine, being applied in several fields of nephrology, discusses how mesothelial cells can be grown as sheets in the laboratory using bioengineering approaches. If successful, this could provide a good treatment avenue for patients on peritoneal dialysis who fear development of encapsulating peritoneal sclerosis- a factor that limits long term application of this modality of treatment.

Erythropoiesis hyporesponsiveness is an important clinical problem in CKD ascribed commonly to iron deficiency or development of neutralizing antibodies to erythropoietin. Here the record of the Japanese is exemplary – their data are far superior to the rest of the world. Their local guidelines for treatment have different targets in comparison to the rest of the world.

Cerebrovascular disease has not received as much attention as other complications in dialysis and CKD patients. Chapter 15 is dedicated to this aspect. It highlights the clinically silent nature of cerebrovascular complications, including silent infarcts, microbleed, white matter hypodensities and subtle clinical deficits related to these abnormalities such as cognitive dysfunction.

Although the cost of treatment is often not discussed in high-resource settings, the chapter 13 on cost effectiveness suggests that the rising healthcare costs of dialysis are beginning to be felt and addressed all over the world. Of course, the Japanese cost-effectivity threshold will not be relevant to the developing world, being related to the GDP (Gross Domestic Product) of a country.

Overall, this compilation offers an interesting insight into the practice of nephrology, in particular dialysis in Japan. The book is well produced with 23 figures and 13 tables. On the downside, one wishes that

the book was shaped around a couple of themes, and had more discussions and analysis of the reasons why the Japanese patients with CKD do better than those elsewhere in the world, however, this is a good resource for someone who wishes to understand the topics that are covered here and chances upon this book in a library.

**Vivekanand Jha**  
Formerly at Department of Nephrology  
Postgraduate Institute of Medical  
Education & Research  
Chandigarh 160 012, India  
vjha@pginephro.org