

**ANAESTHESIA FOR CHRONIC RENAL DISEASE AND RENAL TRANSPLANT: AN UPDATE**

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**ABSTRACT:** Patients with chronic kidney disease have unique pathophysiology relating to both CKD and its underlying cause and therefore present a challenge to anaesthesiologists & surgeons. The aim of this article is to present the features of chronic kidney disease (CKD) that influence the conduct of anaesthesia and to introduce some of the anaesthetic techniques used for this challenging group of patients.

**KEYWORDS:** Chronic kidney disease, Anaesthesia, Vascular access surgery, Brachial plexus block, renal transplant.

**INTRODUCTION:** There have been considerable advances in renal replacement therapy (RRT) and renal transplantation. So a greater number of patients with CKD are presenting for anaesthesia to assist vascular access procedures and renal transplantation. As their survival increases they also present more frequently for surgery unrelated to their renal disease. The aim of this article is to present the features of CKD that influence the conduct of anaesthesia and to describe some of the anaesthetic techniques used for this group of patients.

**AETIOLOGY:** Chronic renal failure or more appropriately chronic kidney disease (CKD) refers to a decline in the glomerular filtration rate (GFR) caused by a variety of diseases such as diabetes mellitus (40%), hypertension (27%), chronic glomerulonephritis (13%), cystic kidney disease (3.5%), interstitial nephritis (4%) and other diseases such as obstructive uropathy, lupus nephritis and acquired immunodeficiency syndrome.<sup>1</sup> CKD may be categorized as mild (GFR of 60-89 ml/min/1.73 m<sup>2</sup>), moderate (GFR of 30-59 ml/min/1.73 m<sup>2</sup>), severe (GFR of 15-29 ml/min/1.73 m<sup>2</sup>), and end-stage renal disease (ESRD). Haemodialysis or peritoneal dialysis is typically initiated as the GFR falls to less than 15 ml/min/1.73 m<sup>2</sup>. The progression of renal disease from one stage to the next results in deleterious effects on multiple organ systems.<sup>2</sup> The effects of renal disease are seen in all organ systems and mediated by accumulation of toxic metabolite products and endocrine dysfunction.

**PHYSIOLOGICAL EFFECTS:** CKD causes multi system dysfunction. This can be mediated by the primary disease process causing renal failure or by the effects of uraemia or both.

**CARDIOVASCULAR SYSTEM:** Almost 50% of deaths in patients with CKD are due to involvement of the cardiovascular system. Damage starts in early stages and frequently in the form of LHD, dilated cardiomyopathy, CCF, LVH and pulmonary hypertension. Accelerated arteriosclerosis is promoted by diabetes and dyslipidemias, while hypertension and cardiomyopathy are usually due to both volume

# Anaesthesia For Chronic Renal Disease And Renal

**Robert R. Redfield**



## **Anaesthesia For Chronic Renal Disease And Renal:**

## Unveiling the Magic of Words: A Review of "**Anaesthesia For Chronic Renal Disease And Renal**"

In some sort of defined by information and interconnectivity, the enchanting power of words has acquired unparalleled significance. Their power to kindle emotions, provoke contemplation, and ignite transformative change is truly awe-inspiring. Enter the realm of "**Anaesthesia For Chronic Renal Disease And Renal**," a mesmerizing literary masterpiece penned by way of a distinguished author, guiding readers on a profound journey to unravel the secrets and potential hidden within every word. In this critique, we shall delve in to the book is central themes, examine its distinctive writing style, and assess its profound effect on the souls of its readers.

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