

Pathophysiologic Changes in Contrast-Induced Acute Renal Failure: A Case Study

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Abstract

With improved medical technology available in Taiwan for treating renal disease, there are nearly 30,000 patients with renal failure annually who need dialysis. (Hung, 1995). Chronic diseases, such as diabetes, hypertension, and cardiac disease, all are associated with renal disease. Renal failure can be categorized into two types, acute or chronic renal failure. The major difference between these is reversibility or unreversibility of disease. If patients with acute renal failure (ARF) are unable to get immediate and adequate medical care, they can progress to unreversible chronic renal failure, with a need for further dialysis or even transplantation. The use of contrast dyes for some common medical procedures is a primary cause of drug-induced ARF. Particularly for patients with renal insufficiency, contrast dyes can make patients' renal function worse. This would not only result in damage to major bodily organs, but also could worsen the quality of life and be a terrible burden for patients and their families. Therefore, diminishing the physical damages induced by pathophysiological changes of acute renal failure is an important issue when caring for this kind of patient. In this paper, we use a theoretical basis to discuss one case study of such pathophysiological changes. In addition, we discuss how an individual nursing assessment and related nursing interventions can improve clinical care for these patients and promote a standard for quality nursing care.

Key words: renal function insufficiency, contrast-induced acute renal failure, pathophysiologic changes

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