Chapter 7
Efficacy and Safety of CAM in Kidney Diseases

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ABSTRACT

The evidence of benefits and safety of complementary and alternative medicine for kidney diseases are still dubious to both practitioners and general public. Chinese herbal medicines are the main CAM in treating chronic kidney disease as an adjunctive therapy to conventional medicine. Several meta-analyses of randomised controlled trials assessing the efficacy of CHM reported that Astragalus and Cordyceps seem to have a beneficial effect on the kidneys. Acupuncture, yoga and aromatherapy may alleviate symptoms in patients with ESRD, such as pain, anxiety and pruritus. This evidence should be interpreted with caution due to several limitations of the RCTs of CAM, i.e., small sample sizes, unclear randomisation and blinding. Acute kidney injury is the common nephropathy caused by herbal and dietary supplements, e.g. aristolochic acid. Dietary supplements may induce uncontrolled hyperkalemia and hyperphosphatemia in patients with advanced CKD. Unregistered herbal products from India and China may be adulterated by conventional medicines and heavy metals, which could cause AKI.

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INTRODUCTION

Patients with kidney diseases, particularly in Asian and African countries, are likely to seek complementary and alternative medicine (CAM) due to being disappointed with conventional medicine, suffering from adverse effects of conventional medicine, or not being able to access or afford standard therapy. In contrast, conventional practitioners often suggest avoiding using CAM on their patients due to the lack of scientific evidence for efficacy and safety of CAM. The Kidney Disease: Improving Global Outcomes organization in 2012 suggested avoiding the use of herbal medicine although patients with chronic kidney disease (CKD) are likely to use CAM and do not inform their doctor about CAM use.

In the literature, CAMs have been mainly used as an adjunctive therapy to conventional medicine in order to complement pharmacological effects of conventional medicines and reduce adverse effects of immunosuppresants in patients with glomerular disease and kidney transplantation. Recently, randomised controlled trials (RCTs) assessing the efficacy of CAM for treating kidney diseases have increased. Several RCTs report that CAM may delay the progression of CKD, and relieve symptoms in dialysis patients. However, the poor quality of these RCTs is the main obstacle to support the use of CAM to treat patients with renal disease. The key methodological concerns were small sample sizes, and unclear randomisation and allocation concealment. In addition, RCTs are more likely to examine short-term effects (less than one year) which jeopardises the external validity of trial results.

This chapter gives an overview of existing clinical evidence of the efficacy and safety of CAM for kidney diseases, dialysis and kidney transplantation to support clinical decision making. Evidence is described separately for Chinese herbal medicine (CHM) and other CAMs. The efficacy section for CHM focuses on herbal and dietary supplements (HDS), and the evidence is presented from the higher (meta-analyses or systematic reviews) to lower (observational studies) levels for inferencing causal relationship. Evidence on complications of end-stage renal disease (ESRD) is organised according to three common complications of ESRD and impacts on biomarkers.

For the safety of CAM, HDS related nephropathy is most frequently reported. However, as there is a lack of consistent and quality reporting of adverse events in RCTs, anecdotes (case reports or case series) are the main evidence source for signaling nephropathy of HDS (Luyckx, 2012).