

# A Systematic Review and Meta-analysis of Using Acupuncture and Acupressure for Uremic Pruritus

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**Introduction.** Uremic pruritus is characterized by an uncomfortable and unlimited sensation which leads to scratch, which strongly reduces the quality of life. Pruritus is a common symptom in patients with end-stage renal disease. Various clinical trial studies have examined the effects of acupuncture and acupressure on treatment of uremic pruritus. This systematic review meta-analysis aimed to evaluate the effectiveness based on published studies.

**Materials and Methods.** An electronic literature search was conducted to identify appropriate trial studies. The results for continuous outcomes were presented as weighted mean difference, with 95% confidence intervals.

**Results.** A total of 5 articles, including 6 trials, were enrolled in this systematic review. Only 3 of the six trial studies used a visual analogue scale score for assessing pruritus and acupressure for intervention regime, which were considered for meta-analysis. The combined results showed that acupuncture or acupressure was effective in treatment of uremic pruritus (pooled mean difference, -1.994; 95% confidence interval, -2.544 to -1.445).

**Conclusions.** This study confirms that using acupuncture and acupressure is effective in treatment of uremic pruritus. However, further vigorous studies are needed to verify these findings.

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## INTRODUCTION

Uremic pruritus (UP) is defined as an uncomfortable and unlimited sensation which leads to scratch and strongly reduces the patient's quality of life. Uremic pruritus is a common symptom in patients with end-stage renal disease (ESRD).<sup>1</sup> About 42% of patients reported moderate to severe pruritus. The existing data revealed that some patient's characteristics and dialysis parameters, such as older age, higher serum C-reactive protein levels, male sex, current or recent smoking habit, lower dialysis adequacy, use of low-flux (versus high-flux) dialysis membrane, higher serum calcium and phosphorus levels, low

serum albumin levels, hepatitis C virus positivity, elevated ferritin levels, and underlying depression, have been associated with the pathogenesis of UP.<sup>2</sup> In addition, newer studies concentrated on opioid-receptor derangements and micro-inflammation as possible causes of UP.<sup>3</sup>

Most physicians recommend taking a stepwise approach for treating uremic pruritus that begins with optimization of dialysis adequacy, adjustment of calcium and phosphorus levels, skin hydration, nutrition control, and education on the importance of avoiding scratching. If symptoms persist, doctors may suggest pharmacological or nonpharmacological therapy (such as acupuncture