

ANTIUROLITHIC EFFECT OF AYURVEDIC DECOCTION *MUTRALA KASHAYA*-AN EXPERIMENTAL STUDY

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ABSTRACT

Diseases of the kidney and urinary tract are significant global health concerns, accounting for an estimated 830,000 deaths annually. Among these, renal calculi (*Mutra ashmani*) are a prominent cause of urinary disorders, arising from the improper elimination of metabolic waste products. *Ayurveda* texts describe the use of a diverse range of medicinal plants, which effectively alleviate urinary disorders, including renal calculi. These plants are known for their anti-inflammatory, diuretic (*Mutrala*), and stone-dissolving (*Ashmani bhedana*) properties. The purpose of this research was to determine the efficacy of a specific ayurvedic formulation in the prevention and management of renal calculi. To determine anti-urolithic action of the decoction (*Kashaya*), the study deployed an animal experimental model. The research aimed to study the anti-urolithic effects of the test drug *Mutrala Kashaya*. Urine samples from the rats were collected and analyzed for anti-urolithic activity, water intake, urine output and urine electrolytes. Additionally, blood samples were examined to assess kidney function, liver function, as well as serum levels of uric acid and calcium. Urine microscopy revealed that crystals didn't appear in the urine on the 21st day in the *Mutrala Kashaya* group, whereas they were observed from the 7th day in the disease control and normal control groups. Renal function tests showed that *Mutrala Kashaya* group significantly reduced the serum creatinine, serum calcium and uric acid levels. *Mutrala Kashaya* demonstrated both preventive and curative effects in the management of renal calculi, as evidenced by various parameters.