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# Effect of *Macrotyloma uniflorum* seeds in ethylene glycol induced urolithiasis in rats

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**Abstract :** *Macrotyloma uniflorum* Linn. (Fabaceae) seeds are widely used for their diuretic and urolithiatic effects in India. The present study investigated the effect of aqueous extract of *Macrotyloma uniflorum* seeds (AEMU) on ethylene glycol induced urolithiasis in rats. To induce urolithiasis, 0.75% *v/v* ethylene glycol was administered orally for 14 days. The curative doses of 400 and 800 *mg/kg* were administered from 15$^{th}$ to 28$^{th}$ day. On 28$^{th}$ day, 24 hr urine, serum was collected and various biochemical parameters were estimated in urine, serum and kidney homogenate along with histology of kidney. Co-administration of AEMU with ethylene glycol has significantly ($p$<0.001) increased the urine volume and the level of calculus inhibitors like magnesium, citrate and decreased the level of calculus promoters like calcium, oxalate, uric acid and urea also decreased in crystallria in urine. AEMU supplement also prevented the pathological changes in kidney and increased the glomerulus activity of the kidney. These results indicate that AEMU showed significant activity in urolithiasis which might be due to its diuretic, calcium oxalate crystal formation inhibitory effects and its ability to increase the levels of inhibitors and decrease the level of promoters of urolithiasis.
**Keywords :** *Macrotyloma uniflorum*, Urolithiasis, Ethylene glycol, Diuresis, Kidney stone.

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