

OP 03

***In vitro* litholytic effect of selected siddha drugs with the aqueous extract of *Musa sapientum* inner stem as an adjuvant on oxalate stone**

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Background: Uroliths are composed of organic matrix and organic & inorganic crystalloids. Siddha drugs are used for the management of urolithiasis along with *Musa sapientum* inner stem (inner core of pseudo stem) extract as the adjuvant.

Objective: To evaluate the *in vitro* antiurolithic effects of Siddha drugs *Silasaththu paspam*, *Nandukkal paspam* and *Venkara paspam* with and without *Musa sapientum* inner stem extract as the adjuvant on oxalate stones.

Methods: Fresh *Musa sapientum* inner stem extract strained through muslin cloth (333 μ l) was diluted with 50mL deionized water. Oxalate stones (75.0mg) were treated with 3.3mg of each different Siddha drugs (*Silasaththu paspam*, *Nandukkal paspam* and *Venkara paspam*) with and without adjuvant (15mL) and incubated at 37°C. Deionized water (15mL) with the stone was used as the control. After 24h, the solutions were decanted and the process was repeated 7 for days. The decanted solution was analyzed for calcium, oxalate, magnesium, inorganic phosphate and uric acid. The results were analyzed using IBM SPSS version 25.0.

Results: Cumulative release of calcium from oxalate stone into each of *Silasaththu paspam*, *Nandukkal paspam* and *Venkara paspam* with the adjuvant were 4.678 (\pm 1.12), 3.345 (\pm 0.84) and 2.656 (\pm 0.07) mg respectively, while cumulative release of oxalate from oxalate stone into above were 3.047 (\pm 0.84), 3.025 (\pm 0.71) and 2.156 (\pm 0.68) mg respectively. And cumulative release of calcium from oxalate stone into *Silasaththu paspam*, *Nandukkal paspam* and *Venkara paspam* without the adjuvant were [2.627(\pm 0.98) mg], [1.994 (\pm 0.91)] and [1.635 (\pm 0.84) mg] respectively while cumulative release of oxalate from oxalate stone into above were [1.848 (\pm 0.48) mg], [1.804 (\pm 0.87) mg], and [1.034 (\pm 0.85) mg] respectively.

Conclusions: All selected Siddha drugs showed better *in vitro* litholytic activity with adjuvant rather than alone. *Silasaththu paspam* with *Musa sapientum* fresh extract of inner stem showed the highest *in vitro* litholytic effect on oxalate stones.