



Antimicrobial, Phytochemical and GC-MS Analysis of *Abutilon indicum* (Linn.) Sweet Parts used as Ayurvedic Drug for Painful Urination as Per *MādhavCikitsā*

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Abstract: Painful urination is a suffering of human population from incontinence of urine caused mostly due to unhygienic internal and surrounding conditions. It is also commonly known as dysuria. This problem was existing since ancient time. To which, *Āyurveda*, the oldest science of healthy living describes treatment through Sanskrit Medical compositions/treatises/ literature under the term as '*Mūtrakṛcchra*' and enlisted different herbal formulations for the treatment. *MādhavCikitsā* is one of the *Āyurvedic* compendia written by *AcāryaMādhava* (Ca 7-8th CE) that mainly deals with treatment part of diseases in similar line to his *MādhavaNidānam*. The present study was an attempt to investigate the antimicrobial activity and phytochemical analysis of plant part extracts of the sampled out medicinal herb *Abutilon indicum* (Linn.) Sweet (Malvaceae), which has been mentioned in *MādhavCikitsā* for *Mūtrakṛcchra* and to rationalize the findings with the treatment of the disease. The antimicrobial activity test experiments conducted with the whole plant extract responded positive to establish the plant's antibiotic nature. The qualitative phytochemical tests confirm that the plant extract (made in different solvents) contains alkaloids, flavonoids, steroids, glycosides, saponins, phenols, terpenoid and tannins. The Gas chromatography-Mass spectrometry (GC-MS) analysis of the methanolic extract of whole plant further validates the qualitative phytochemical data. The compounds identified are Oleic acid, 10-Undecen-1 al, 2-methyl, (Z)6, (Z)9-Pentadecadien-1-Ol, Phytol, 17-Octadecyonic Acid, n-Hexadecanoic acid, Oxirane, tetradecyl, 3,7,11,15-Tetramethyl-2-hexadecane-1-ol. These compounds are having proven anti-microbial, anti-inflammatory, diuretic and anti-oxidant, etc. properties. Hence, use of *Abutilon indicum* for the treatment of *Mūtrakṛcchra* by *Mādhava* establishes its merit.

Keywords : Painful urination, *Āyurveda*, *Mūtrakṛcchra*, *AcāryaMādhava*, antimicrobial activity, phytochemical analysis, *MādhavCikitsā*, GC-MS analysis.